

The Government has not yet decided whether to end local government control of public sector higher education, but is determined to set up a national planning focus for it.

A consultative document issued this week by Mr Mark Carlisle, the Secretary of State for Education and Science, says that a new central focus is necessary to create "a balanced and nationally coordinated provision within set financial limits."

Special interest groups and members of the public have until the end of November to comment on the paper and respond to two alternative approaches outlined in it.

Both entail creating a national funding and planning body, but one would retain local authority control while the other would transfer the 90 polytechnics and major colleges to a new sector directly funded by central government.

The document does not express a preference for either model. But the second, which would end local government control, is almost identical to the one contained in a DES document leaked in *The Times* last February. The first model is based on proposals devised since then by the Council of Local Education Authorities.

Existing arrangements for funding and managing public sector higher education and its £400m annual spending have become generally unacceptable, the document says.

The unrecited sharing (or "pooling") by i.e.s as collectively of the expenditure on higher education did not satisfy the principle of accountability; provided little incentive for financial control and discipline; and represented an open-ended commitment of national resources to maintained higher education.

The challenge of the 1990s, the



Body language

The Government this week published its Green Paper on the future control of public sector higher education. Peter David outlines the two alternative proposals

document argues, is to ensure that this wide range of provision is not haphazardly affected by local decisions. The present course approvals machinery could not achieve what is now required. It is therefore necessary to create new machinery which could make both educational and financial judgments.

Neither the Oakes Report in 1978 nor last year's recommendations by the Commons education select committee offered a convincing blueprint for such a national body, the document says. Both would have left individual local authorities free to distort the strategies and initiatives of the central body.

"What is needed is an assurance that the individual local authority will not distort the central body's perspective; alternatively, there must be a relationship under which the institutions become directly accountable to the central body."

Model A, developed by CLEA, would keep local government control over public sector higher education, work through the existing pooling arrangements and create a national body to oversee all the polytechnics and colleges offering advanced courses.

Model B, developed by the DES, would end local authority control, work through direct Exchequer funding and remove the polytechnics and 60 other colleges from the remainder of the further education system.

Model A would create a small central body made up of representatives directly engaged in providing

public sector higher education. In recognition of their legal and financial responsibilities, local authorities would have a majority.

Principals and teaching staff would be "a substantial minority group." Other interests, such as industry and commerce, would be associated with the body although not necessarily given actual membership. Assessments would be offered, for example to the DES. A suitable arrangement would be worked out to embrace the direct grant and voluntary colleges.

"Constituted with a local authority majority, the body would exercise some collective authority on behalf of the individual local authorities and so allow the surrender to it of a degree of local autonomy and discretion," the document says.

"Such a body would be able, and might be formally empowered, to insist that the traditional discretion of individual authorities be waived in acknowledgement of overriding national priorities agreed centrally by the new body."

Under Model A the current relationships between colleges and their maintaining authority would continue basically as before. But CLEA sees a need under the proposed system to enhance their control over individual colleges through amendments to the articles of government.

Under Model B a new sector of higher education would be created comprising all the major non-university institutions which would be financed directly from Exchequer

funds disbursed by a central body, in this case appointed by the Secretary of State.

This body might consist of a chairman and about 20 members, academics and non-academics, with a significant weight attaching to industry and commerce. The DES, together with other Government departments, the University Grants Committee and CLEA might appoint assessors.

This new sector would contain colleges which are already centrally funded, those which are predominantly engaged in higher education, those which provide initial teacher training and those which make a major national provision in "certain specific subject areas."

It would include 90 or so colleges and 80 per cent of students taking advanced courses in the public sector. The remaining institutions - about 300 of them - would be financed under separate arrangements. Most of the colleges transferred to the new sector would be given corporate status. New governing bodies would be given responsibility for property, staff, rights and liabilities.

The government places great importance on the ability of a new central body to ensure that its decisions are executed. In Model B this should cause no difficulty because of the direct relationship between the body and the institutions.

"With Model A the test can be passed only if local education authorities cede a degree of autonomy over financing and the balance and dis-

tribution of provision, and if they accept the need for sanctions, they depart from the central allocations," the document says.

To enable the new body to exercise effective planning for education it would be a major advantage if it had oversight of teacher training. This, however, would raise the question of how to include the voluntary and grant colleges.

Under Model B the interest of voluntary and direct colleges would be safeguarded because no sector group would predominate. Model A, on the other hand, would require careful negotiation to reconcile interests of the voluntary and direct grant colleges with the local authority majority.

Under both models the Secretary of State would appoint the body members - directly under Model A and in accordance with nominations from special interests under Model A.

"The actual composition of the central body will depend on its size and function. Model A, for example, envisages a small body with a local authority majority and standing machinery for assessors for each side."

"The Model B approach is different, essentially because the central body would be dealing with newly incorporated institutions. This allows the central body to be composed not of representatives of nominees appointed in their own right, academics and non-academics, people from commerce, industry, local government and the universities."

"Consultation will underline the strengths and weaknesses of these conflicting propositions, and other variations will be proposed. The essential criterion remains constant: that the public interest is reflected in the form of central body chosen."

Copies of the consultative document, Higher Education in England Outside the Universities: Policy, Funding and Management, are available free from the Public Enquiry Centre, Department of Education and Science, Government Buildings, Hansport Lane, Stanmore, Middlesex HA7 1AZ.

North American news

Research ruined by fruit spraying

from Clive Cookson

WASHINGTON Scientists at Stanford University have been appalled by California's controversial decision to spray a wide area around the university with the insecticide Malathion, in an attempt to eliminate the Mediterranean fruit fly.

Their concern was centred not on the possible health effects on humans - though they are a worry - but on the potential damage to the university's long-term biological experiments.

Dr Robert Schinke, the chairman of Stanford's Department of Biological Sciences, said: "Aerial spraying of Malathion, with its attendant indiscriminate killing of various insects, will have a serious impact on many of the research programmes within the university, including all facilities whose research employs other insects and/or plants in a natural habitat, or under controlled conditions."

"Virtually millions of dollars are invested in experimental systems, and Malathion spraying would constitute such a major perturbation of these experiments that the experimental systems would have to be considered finished."

Mr Jerry Brown, the governor of California, ordered aerial spraying of a three-county area south of the San Francisco Bay, which is infested with medflies, as the tiny insect is called. Mr Brown had wanted to fight the voracious pests by stripping fruit trees and spraying from the ground, but the Federal government forced the state to take to the air. The governor's resistance to aerial spraying, which he said was environmentally hazardous, collapsed when Mr John Block, the American agriculture secretary, threatened to quarantine all agricultural produce

from California which is the nation's main fruit and vegetable growing region.

The most serious threat is to Stanford's 10,000-acre Jasper Ridge Biologic Preserve, which lies on the edge of the area infested with flies. Jasper Ridge is used for long-term studies of natural ecological systems, which could be ruined if Malathion spray drifts into the preserve. One famous experiment there is Paul Ehrlich's 25-year study of the checkerspot butterfly, which Dr Schinke said was the longest investigation "ever to have been carried out on any organism in research."

Dr Alan Grundmann, a Stanford biologist, said in a telephone interview last week that he was still negotiating with the state medfly project a flight plan that would minimize the danger of insecticide getting into the preserve when the helicopters spray along the border of Jasper Ridge. "They are not going to spray deliberately inside the preserve," he said.

Apart from the direct effects on their research, scientists at Stanford and the University of California are split over the general wisdom of aerial spraying with Malathion. Some see it as the only way to get rid of a pest that threatens Californian fruit crops, which are worth \$4,000 a year, before it affects the main commercial fruit-growing areas. Others claim that the insecticide's safety for humans has not been proved and that the spraying may kill - killing large numbers of beneficial insects without eliminating the medfly.

Dr Bruce Ames, a biochemist at the University of California, Berkeley, who is well known for inventing the Ames test for mutagenicity, feels that the health dangers of Malathion, an organophosphate compound, have been exaggerated.



Mr Brown: ordered spraying



Mr Block: threatened quarantine

'Suicide' professor was victim of campus spies

The mysterious death of a mathematics professor from Carnegie-Mellon University while on holiday in his native Taiwan, has sparked a bitter dispute over the role of government informers among foreign students in the United States.

Wen-chien Chen, a 31-year-old statistician, was found dead on the campus of the National University of Taiwan early this month - hours after being subjected to a day-long interrogation by security police about his alleged anti-government activities. According to the Taiwanese authorities Dr Chen fell to his death from the fifth floor of the university library, either by accident or as a suicide.

However Dr Chen's colleagues at Carnegie-Mellon University in Pittsburgh rejected that explanation. A spokesman said: "The people in his department rule out suicide; he was not the sort of person to kill himself, and we believe an accident would be an incredible coincidence so soon after a 13-hour interrogation by the police."

Officials at Carnegie-Mellon have suggested that Dr Chen may in fact have been the victim of a political murder, because of his opposition to the Kuomintang (Chinese nationalists) who have ruled Taiwan for more than 30 years and the suspicions are shared by several American politicians.

In a telegram read at a memorial service for Dr Chen on the Carnegie-Mellon campus, Congressman Stephen Solarz announced that the House of Representatives Subcommittee on Asian and Pacific Affairs, which he chairs, would hold a public hearing on the case next week. "The apparent murder of Professor Chen is of great concern to me and my colleagues."

Whatever the immediate cause of Dr Chen's death, his interrogation raises disturbing questions about the role of government agents among the 18,000 Taiwanese students in the United States. For the security police who questioned Dr Chen in Taipei before he died apparently knew in detail about his political activities in Pittsburgh. According to the Carnegie-Mellon spokesman, Dr Chen had distributed leaflets there about anti-government demonstrations in Taiwan.

Carnegie-Mellon officials and the American politicians who have taken up the case suspect that the security police were so well up on Dr Chen's activities because they had been supplied with evidence by Taiwanese informants - probably students - in the United States. Congressman Jim Leach, another member of the House Subcommittee on Asian and Pacific Affairs, said Dr Chen was confronted with photocopies of letters he had written and recordings of speeches and telephone calls he had made in Pittsburgh.

Mr Leach has called on the US State Department to tell the Taiwan government by informants who, directly or indirectly, report to the Taiwan government on the action of Taiwanese faculty and students in this country.

In a letter to the Assistant Secretary of State for East Asian and Pacific Affairs, Mr Leach said the Chen case was "a startling example of how these informants keep track of Taiwanese activities in the United States for referral to Taiwan's martial law authorities. This kind of intelligence operation being carried out

on our campuses runs counter to the traditions if not the laws of this country."

Charges of that sort have been made several times in recent years, and not only about Taiwan. The governments of Iran, Libya and South Korea have all been accused of using students in the United States to spy on their citizens.

Members of the House Asian and Pacific Affairs Subcommittee are "very disturbed" about the whole problem, according to a staff aide, and they are likely to call for a wider Congressional investigation into the activities of foreign agents on American campuses, perhaps in the autumn.

However, it is extremely difficult to conduct a public inquiry into such matters. The informers are not going to admit openly what they are doing, and, for obvious reasons, anti-government students are reluctant to speak out about their fears and suspicions.

The 64 Taiwanese students at Carnegie-Mellon are clearly divided into pro-and anti-government camps, according to university officials. The regime's supporters have spoken out loudly, talking to the press and taking issue with university president Richard Cyert for questioning the official explanation that Dr Chen died by accident or suicide. In contrast "anti-government students aren't saying a word" and they are reluctant to speak to reporters even when promised anonymity.

President Cyert has become actively involved in the controversy. He sent the President of Taiwan a telegram stating the university's doubts about the case and calling for a more thorough inquiry. He also expressed concern about the safety of Dr Chen's wife and son, who are held in Taiwan without exit visas.

In reply Dr Cyert was told that the district prosecutor in Taipei had investigated the death and found "no evidence suggesting murder". He was assured that Mrs Chen and her son would be permitted to leave Taiwan before long.

FBI called in over Libyan student's death

The Federal Bureau of Investigation is investigating the possibility that a Libyan student who was murdered this month at Weber State College, Utah, was killed for political reasons. The body of the 32-year-old victim, Nabil Mansour, was found stuffed inside the boot of his car, with several shots through the head.

A suspect, fellow Libyan student Mohamed Shabata, was arrested at Chicago's International Airport as he prepared to catch a flight out of the country. Both men were studying diesel technology at Weber State College.

FBI and police are questioning Mr Shabata, who has been charged with the murder, to see whether the case might be connected to internal Libyan politics. Several Libyan exiles, who were known opponents of the regime of Muammar El-Qaddafi, have been killed in Europe and last autumn a resident Libyan student at Colorado State University was shot in the head and severely wounded. There have been allegations that the man recently killed, Eugene Tafaya, took his orders from Tripoli.

Draft dodgers face prosecution

The Reagan administration has injected some life into the sleepy anti-draft movement by announcing that it is considering prosecution of 134 young men who failed to register for possible conscription.

An official for the Selective Service System which administers the draft, estimated that about 400,000 have failed to register since President Carter required 19 and 20-year-olds

to do so last year. The 134 were chosen for possible prosecution because they ostentatiously defied the law, were turned in by citizen complaints, or failed to respond to warning letters.

The Committee Against Registration and the Draft promised that if any arrests take place protests will be held at Federal buildings across the United States.

UGC allays fears of rising part-time fees

Fears of a huge rise in part-time university fees were allayed this week by the University Grants Committee.

Universities will be receiving a letter clarifying the new rules on part-time fees which the UGC claims have been misinterpreted.

The confusion arises from the new regulations which were contained in the general UGC letter sent out to all universities at the beginning of July.

Universities took this to say that fees for part-time students should be half the full-time rate. Staff and students feared that fees would rise next year to £360 for a part-time undergraduate course and £660 for a postgraduate course.

A UGC spokesman said this week that he could not understand why universities were confused. The original letter clearly recommended that universities charged part-time fees at a rate that was half the full-time equivalent.

This meant that a part-time undergraduate attending university a third of the week would pay £130 next year at a sixth of the full-time rate. Using the same equation, a postgraduate student attending half the week would pay £330 at a quarter.

Five fellowships

Five polytechnic lecturers are to be seconded to manufacturing industry over the next year under a new scheme of Leverhulme fellowships in engineering practice.

The five fellows will remain on full salary and their parent institutions will receive funds to meet the cost of temporary replacements. The scheme, which will fund five fellowships a year over the next four years, has been initiated by the Committee of Directors of Polytechnics.

Triple burden of young blacks

by Paul Flather

Black young people suffer hardship because they are involved in a society that does little to help them not because they are alienated from Britain, according to a new paper from the Social Science Research Council's unit on ethnic relations.

The real frustration and anger among young blacks stem from the knowledge that white institutions have shown contempt for the problems they face, says the paper which was submitted last week as background evidence to the Scarman inquiry into the Brixton riots.

The report, *Black unemployment and urban conflict*, has been prepared by Mr Malcolm Cross, senior research fellow at the SSRU unit which is based at Aston University.

The theme of the paper is that official responses to the plight of young blacks is based on the misconception that they are poor workers

because of their cultural and social disadvantages. As a result public policy has been largely ineffectual.

Young blacks suffer a triple burden: chronically high unemployment; concentration in deprived inner city areas; and lack of opportunity for real skilled training.

The paper quotes evidence to show that the unemployment rate (1977) among British born black men was 21 per cent, compared to 5.3 per cent for whites. For black women it was 24 per cent compared to 4.3 per cent.

Evidence collected by the Department of Employment and the Commission for Racial Equality shows that blacks try as hard as whites to find jobs, with much less success.

Indeed, the paper says, the ethnic minorities usually display greater application in job search, further education, and use of official career channels which do not deliver.

The report claims that each of the Government's responses however has been misdirected.

● The urban aid programme, £192m last year, bears no correlation between allocation of grants and proportion of blacks in an area.

● Special education is more "black studies for black kids" than useful training.

● Employment policies have failed to provide the systematic training needed by blacks for "survival and self-employment", with many blacks escaping the 16-19 net because they are a little older.

Mr Cross says: "We have failed to move to a solution to the problem because we have failed to understand the problem. The crisis faced by black youth is not the result of some individual or group pathology." He concludes that anger is born of familiarity with the contempt shown by whites for blacks.

Chance to save art course

by David Jobbins

Staff who object to the closure of the art foundation course at Leicester Polytechnic are to have a further chance to argue their case. Leicester Polytechnic has referred the issue back to the polytechnic's governing body after hearing a report from the county's director of education, Mr Andrew Fairbairn, outlining the reasons for a merger with a similar foundation course at Loughborough College of Art.

The report drew attention to the declining numbers of 18-year-olds after 1985-86 and the dangers of having two small courses running within the county.

Mr Fairbairn also outlined savings to the county of £40,000 a year and to the polytechnic of about £15,000 a year if the merger went ahead. Modifications to buildings at Loughborough to take the additional students and staff would be covered by receipts from the sale of the city centre premises in Leicester.

"From the economic point of view, the merger is a sound proposition of two very small courses versus one," Mr Fairbairn said.

The Polytechnic governors have already given qualified backing to the closure and governors of the college have now supported the plan for a merger.

"The sub-committee thought the matter should be referred to the polytechnic governing body and was very well," Mr Fairbairn said.

The foundation art course is the only non-advanced work at the polytechnic, and this is believed to have been a major part of the case for its closure.

Welsh museum board urged

A University Museums Board for Wales should be set up as a matter of urgency to protect museums from possible closure, a report from the Standing Commission on Museums and Galleries recommended this week.

The report by Professor Brian Morris, principal of St David's University College, says that financial cuts might result in fewer staff and thereby the possible closure of museums.

To avoid this, a board should be established to make contact with the local authorities, co-ordinate the work of museums in the colleges and make the best use of resources available within the university.

It also advocates the involvement of students in museums, and recommends that museums should be given a major part of the case for its closure.

Recruiting firm accused of fraud

Two college presidents, three other education officials and a professional student recruiter have been indicted for allegedly helping hundreds of Iranians to obtain fraudulent visas to study in the United States.

According to the indictments handed down by a Federal grand jury, Peter Galonis, who was president of International Educational Services, a student recruiting firm, arranged for the five educators to sign blank certificates of eligibility, which are necessary to obtain American student visas. Mr Galonis then sold about 400 of the forms, for up to \$500 each, in Iran. The alleged conspiracy took place in 1976, when thousands of wealthy Iranians were clamouring to study in the United States.

The other defendants include the presidents of two small colleges (Nichols College and Emerson Col-

lege), the admissions directors of two others (Ricker College and North Greenville College), and the head of a private secondary school. The five institutions agreed to pay Mr Galonis a commission of 15 per cent of all tuition fees paid by the Iranians whom he recruited with the pre-signed certificates, according to the charges.

Under American law, the eligibility certificates should be completed in the United States by college officials who have evaluated the academic qualifications and financial circumstances of each applicant. However, federal officials have been aware for several years that unscrupulous institutions, desperate to fill up their classrooms with wealthy foreign students, signed blank forms and sent them out to the Middle East.

There a paid recruiter would sell

them to anyone whose financial circumstances were right - academic circumstances hardly mattered. The certificates were then completed and falsely dated to make it seem that they had been issued in the United States, as is alleged to have happened in this case.

One defendant, Fred Mullinar, formerly of North Greenville College, has pleaded guilty to one charge of making false statements on a student visa form. He was fined \$500. According to the justice department, Mr Mullinar has agreed to cooperate with the government in its case against the other five and the remaining charges against him may be dropped.

Altogether the men face more than 20 charges including conspiracy and mail fraud. They could be sent to jail for up to five years or fined up to \$10,000 each, if convicted.

Law school denied bar accreditation

the air he regularly appeals for donations.

Prospective faculty members and students wishing to attend ORU must sign a "code of honour" affirming their belief in Christ as their "lord and saviour". Inquiries are made as to whether they are "born again" and "speak in tongues".

Accreditation requirements of the American Bar Association prohibit religious discrimination in admitting students and in hiring, retaining, promoting and paying faculty members.

As ORU will not have the opportunity to argue an appeal to the clerk will be necessary. The first law appeal in the history of the state is making

Oral Roberts University has been notified by the American Bar Association that it has declined accreditation to the ORU law school citing "religious discrimination".

Without accreditation ORU law students (the first will graduate next spring) will be unable to take the bar examination or to practise law in any of the 50 states of the United States.

ORU was founded just over a decade ago by Oral Roberts, an Oklahoma fundamentalist preacher and faith healer, as an all-faculties university. The money came from donations by subscribers (Mr Roberts calls them his "partners") in his television ministry, where on

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Overseas news

Pinochet aims to take control

by Fay Haussman

Two new laws have been passed in Chile, one governing universities, and the other professional colleges. Both laws are part of President General Augusto Pinochet Ugarte's continuing, and so far only partly successful, endeavours to bring Chilean universities under his political, ideological and academic control.

The law on universities opens the door to the creation of more universities, and reduces to 12 the recognized careers for which a university degree will be essential. All other professions, including sociology, philosophy, journalism, pedagogy and human sciences in general, may from now on be taught at establishments other than universities, such as professional institutions and technological academies.

The professional colleges, with a long tradition as guardians of professional integrity and defenders of their members, have been stripped of their chief attribute: membership in a professional college will no longer be a compulsory legal prerequisite for professional activities. All that will be needed by anyone wanting to practice his profession will be to record his license or degree in a central registry.

When the Chilean military overthrew Allende in 1973, they took over the universities practically overnight. Civilian rectors were replaced by military officers; thousands of students were expelled; about 30 per cent of all university professors were purged, most of them tenured. The military rectors had total, incontestable power over faculties but, lacking all experience of how to handle an



General Pinochet: new laws

academic community, inevitably misused their power. In seven years, Chile's eight universities have had about 30 rectors.

Even so, a certain atmosphere of academic unrest persisted. And since Chile's two large public universities, the University of Chile (60,000 students), and the State Technical University (30,000 students) have branches all over the country, dissident opinions voiced, for example, among the 20,000 students of the University of Chile in Santiago would rapidly spread to their 40,000 colleagues.

In 1979, the first elections for student delegates held in Chilean universities under the military regime gave a clear victory to candidates opposed to the authorities. If nothing else, the elections showed a high degree of political commitment

among students. Obviously also official control had remained inadequate and security forces once more focused on the universities. In early 1980, in the first major purge since 1973, 240 professors were dismissed, ostensibly for reasons of economy, but in fact because they were considered politically unreliable.

Among those affected was Manuel Sanhueza, former dean of the law school at the University of Concepción, who had headed a group of lawyers trying to prepare a new democratic constitution for Chile, and Mario Zañartu, a Harvard graduate economist at the University of Chile's School of Economics, whose research of Chilean economic performance contradicted official shibboleths.

"The junta has realized that it couldn't manage the universities. Only by breaking them up will they be able to break the power of the students and muffle dissent," said professor Enrique Kirberg in a recent interview at Columbia University.

Professor Kirberg, the rector of Chile's State Technical University under Allende, had been arrested in 1973 and sent to Dawson's Island, from where he was released only through international pressure. "Some of the military rectors have been very bad and have been bringing down academic standards. They are not subject to any kind of control, and they can create new institutions at will. Now the Ministry of Education is about to create 12 new private universities, without any professional control over the quality of their courses."

'Mass promotions' start wave of unrest in India

from A. S. Abraham

The ultimate dream of Indian university student agitators has finally come true: passing from one stage to the next without having to bother about intermediary qualifying examinations.

South Gujarat University in western India has decided to promote first- and second-year arts, science and commerce undergraduates en masse, without having to take the tests at the end of each year of study that students elsewhere in India must pass.

Under the three-year, first-degree course, an internal examination is held at the end of the first and second years. There is a public examination at the end of the third year, success in which leads to the conferment of a degree.

Encouraged by what their counterparts in South Gujarat University

have accomplished, students of Ayurveda University in the state (Ayurveda is an indigenous system of medicine) are demanding "mass promotions" as well.

Similar rumblings are being heard on other Gujarat campuses and it cannot be long before the riotous students in northern Indian universities, especially in Bihar, Uttar Pradesh and Madhya Pradesh states, also start demanding promotions as a matter of course rather than of merit.

The rot set in when many Indian universities allowed students who had failed an examination to move on to the next stage and take a double examination the next time round, the one which the student had failed to clear and the second for the stage into which he had never been admitted. This system has come to be known among students as ATKT, for "Allowed To Keep Terms".

Health teaching reorganized

The Indian government has put forward a proposal at a conference in New Delhi of federal health councils and family welfare organizations, for an integrated course in medical education that combines the best points of allopathy, homoeopathy and various indigenous systems.

At present, allopathy dominates the Indian medical scene, although homoeopathy, ayurveda (an indigenous system based on Hindu texts) and unani (a similar Muslim system) have their own set-up of colleges, instruction and certification. But healers trained in these systems do not have the same prestige as allopaths.

The government has suggested the appointment of a body comprising leading practitioners of the various systems to devise a curriculum that will mean "the cheapest and most practical amalgam of all the systems in the not-too-distant future". It wants chairs in the Indian systems and in homoeopathy to be instituted in postgraduate allopathic colleges and a certain number of lectures in the non-allopathic systems to be made compulsory at undergraduate and post-graduate levels in these

colleges. The government has taken its cue from a joint study, *Health For All: An Alternative Strategy*, by the Indian Council of Medical Research and the Indian Council of Social Science Research, which recommended the development of "a national system of health care in which all the different systems can make their own unique contribution". This is seen to be in line with the international strategy announced at Alma Ata not very long ago, urging poor countries to de-emphasize Western-orientated medical systems and approaches and encourage indigenous ones that are cheaper and no less effective.

Despite this, the Indian Medical Association, the powerful organization of allopathic doctors, is certain to resist attempts to "dilute" the quality of allopathic training by mixing allopathy with what the IMA considers to be less scientific systems. The previous Janata government (1977-80), sympathetic to indigenous sentiments on the issue, had proposed an integrated medical education course. But the IMA and other pro-allopathic lobbies soon shot it down.



Professor Lewis: addressed students

Union leader gets suspended sentence

from Stephen Taylor

The president of the Students Representative Council at the University of Zimbabwe was given a suspended prison sentence of a year by a Salisbury magistrate. Mr Clifford Mashiri's appearance in court stemmed from events on the campus in April when the principal and two senior staff were detained for more than five hours by members of the SRC after a strike by university workers.

Professor John Lewis, the principal, said in evidence that he had gone out to address the students and workers with Mr Robert Blair, the registrar. Mr Mashiri, who was addressing the crowd through a loudspeaker, had refused to allow them to leave, he said.

They were joined by Professor Geoffrey Bond, the vice principal, who was also detained during the afternoon. The three men, referred to at the time as "hostages" by Mr Mashiri, were not allowed to move into the shade or to smoke. They were finally released after an address to the crowd by Senator Joseph Culverwell, the deputy minister of education, who also negotiated with the SRC leaders.

Mr Mashiri, pleaded guilty and agreed with the outline of the state case but denied that he had been a prime mover in the events, maintaining that he was merely acting as a spokesman for the students and workers.

Job chances shrink for graduates

from John Walshe

DUBLIN

The recession is taking its toll on the Irish graduates' jobs market, but their unemployment rate is still lower than the rest of the population. The latest survey of career patterns for the 1980 graduates from the five university colleges shows an unemployment rate of 4.7 per cent - double the previous year's rate.

The relatively low overall jobless rate however masks high rates for some individual faculties. For instance, 29 per cent of those who acquired the Higher Diploma in Education were unable to get jobs as secondary teachers.

And, despite manpower studies showing a big demand for computer personnel, graduates with that expertise often found it difficult to get related work. This was probably due to employers insisting on experienced personnel. There is also evidence that some graduates are taking jobs at a lower level than their qualifications prepared them for.

The survey, conducted by the Association of Irish University Careers and Appointments Services, shows that 36.6 per cent of first degree holders went directly into employment, 13.7 per cent went on for research work or further academic study, 28.2 per cent went on for other vocational and professional training and 1.3 per cent were unavailable for work.

Of the 474 higher degree graduates accounted for, only 18 or 3.8 per cent were found to be still seeking employment. Seventy-seven per cent gained employment and the rest were either in further study, training or undertaking research work, or were unavailable for employment.

The survey gives statistical information about 4,428 graduates who had completed first and higher degrees last year, representing 91 per cent of all university graduates that year.

Eight per cent of first degree holders and 17 per cent of higher degree graduates left Ireland.

Sri Lankan students in revolt

from D. B. Udalgama

COLOMBO

Students at the University of Kelaniya stormed into the vice-chancellor's office and held him and the registrar captive till the police rescued them. And under graduates at the University of Jaffna forced the vice-chancellor to put students' demands to the University Grants Commission.

At Colombo University students boycotted lectures for a week after university authorities agreed to cancel the expulsion of two students (ragging), pending a second inquiry into the incidents.

Meanwhile at the University of Peradeniya engineering students boycotted examinations in protest against what they called the school schedule and, though a new date had been fixed, no students have attended. They resorted to picketing till the authorities ordered the university out of bounds to them. But the protest was continuing.

This has been the pattern in universities for three months or so. There is hardly a time when students do not protest (normally in the form of boycotts but spilling into violence occasionally as at Kelaniya) to take place in one or the other of the universities. And the authorities do not seem to have an effective answer.

Indeed, in the case of the Kelaniya university incidents, a threat team, headed by a former vice-chancellor, reported that a "bad dialogue" had contributed to the violence last April. The vice-chancellor replied: "I am at a loss to understand how I could maintain a dialogue with a student group of psychopaths!"

The report said there was discontent and frustration among the students, mainly arising from the solution of the student assembly few months earlier which may have been aggravated by strict application of disciplinary rules to prevent ragging.

Postgraduate places increased

by Peter Mauger

China's 675 institutions of higher education will enrol 10,000 post-graduates this autumn for master's degrees. During the Cultural Revolution there was very little postgraduate study and research in all areas suffered. Now, with the drive for modernization, specialists are needed in all fields. Bachelor's, master's and doctoral degrees will be conferred in philosophy, economics, law, education, literature, history, science, engineering, agronomy and medicine. Postgraduate places will be awarded by examination in the following subjects: political theory, foreign language, general knowledge, basic knowledge in the area of specialization and knowledge in sub-specialities.

China is also stepping up the number of postgraduates sent abroad for advanced study. Since 1977 some 2,700 postgraduates have gone to countries for advanced study. The famous University of Science and Technology at Hefei, Anhui Province, for example, has postgraduate students in Japan, the USA, France, West Germany and in this country and at the Imperial College and the universities of Manchester and Sussex. One of many British students taking Chinese postgraduate study is a student from the Gansu Institute of Technology and a third from Shandong University.

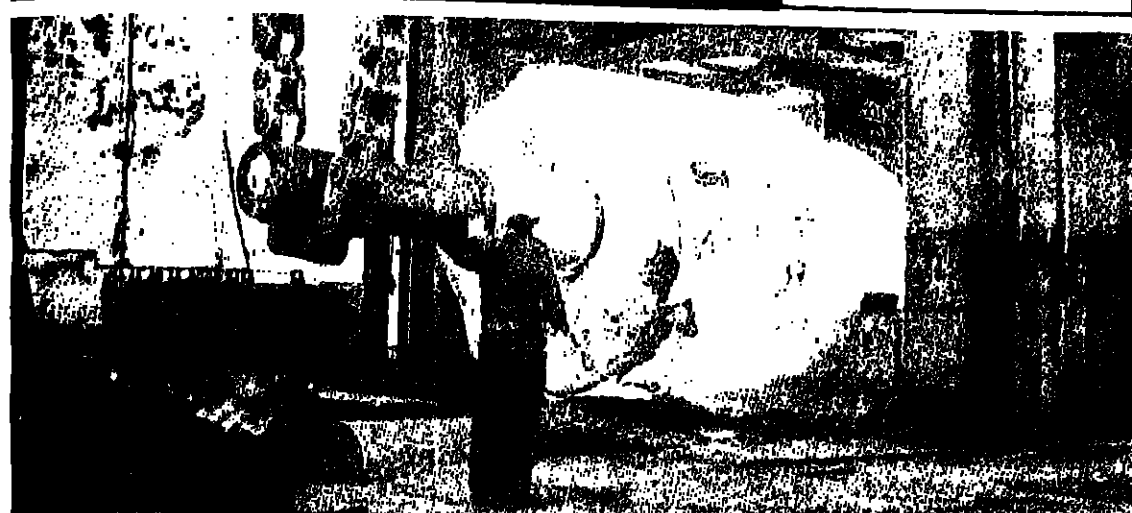
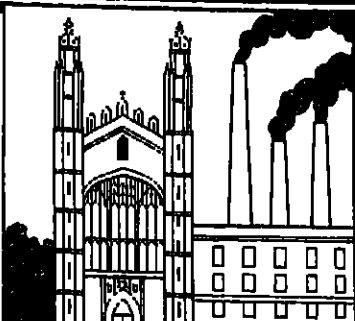
Backing for private sector

from Emil Zubryn

The Mexican Management Confederation (Coparmex) has publicly called for the defence of private institutions of higher learning. Jose Maria Basagol, the organization's vice president, said that any controls to limit the expansion of private education would be "suicidal" due to the state's inability to resolve the major problems affecting Mexico: the lack of trained professionals and qualified technicians. He added the freedom of education is necessary for Mexico to continue its economic growth in the future.

refuting a statement made by Angel Escobar which, he said, would "monopolize" education, set up legislation to control the further expansion of private institutions. Maria Basagol expressed surprise and preoccupation with the recurrent "fanatic" attempts to control private institutions and the extent of labeling of education as high-tech, for his part, he said, the government was concerned with the private sector (financial) of industry and commerce, and also the alleged infiltration of clerical interests (always a moot point in Mexico).

How do universities and polytechnics actually collaborate with industry? In the third of our occasional series on the links between higher education and industry Ngaio Crequer looks at Brunel, the only university where all the undergraduates are sandwich students, and Paul Flather at Sheffield Polytechnic, which is strengthening its contribution to the ailing steel economy in South Yorkshire.



Sheffield steel: painful readjustments are needed

Forging a brighter future

Like Rome, Sheffield was built on seven hills. However, its prosperity was linked less to the success of its armies than to its supply of local resources: these hills were full of iron ore, there were woods to provide charcoal for smelting, fast rivers to power waterwheels, and millstone grit to make grindstones. But in the age of new technology, raw materials count for less, and the British capital of tool-making is having to adjust painfully.

Last week's unemployment figures revealed that even Sheffield is rapidly approaching the national average of 11.6 per cent of the workforce are jobless, including 867 research workers in steel just last month.

The growing recession has been a key factor in leading Sheffield Polytechnic to review the links it has developed in the past 15 years with local industry.

George Tolley, principal of the polytechnic, described it frankly as a question of survival. "There is obvious pressure and need for us to do more to help local firms, and of course it is important for us to earn revenue from every possible source," he said.

A second major influence, according to Dr Tolley, was the need to open up new areas of motivation for polytechnic lecturers. "We needed to show that work with industry was an essential part of overall polytechnic work, and with little chance of promotion and movement these days, that could motivate staff." There is a question that Sheffield has been among the leaders of the 30 polytechnics in working with local industry, it recently decided there was room for an even larger contribution.

Last December, the polytechnic set up a high-powered study group to review its links with South Yorkshire's economy. In its report in April, the group noted the increasing job losses in the area, its dependence on steel, and the little evidence to suggest new industries were being developed to replace steel.

The group identified four major channels through which Sheffield, in common with all polytechnics, contributed to local industry. First, it does so through its large short course programme which attracts about 5,000 students each year. The Yorkshire and Humberside regional management centre based in Sheffield for example, runs training courses for example, as well as advising firms on raising capital - diversifying product lines.

Second, there is the polytechnic research programme, much of which is undertaken in collaboration with industry. Third, there is its consultancy work. The study group noted that it was probable that neither the volume nor the quality of such work

was as high as it could be, and that many in industry remained slow in seeking advice from the polytechnic "perhaps because they do not perceive the need for outside assistance".

Fourth, there were the special services given to industry through the Sheffield Centre for Innovation and Productivity (SCIP) with its three arms: the industrial liaison unit, the small firms management advisory service, and the automation advisory unit.

The study group urged that the best way the polytechnic could help in the city council's avowed policy to safeguard and create jobs was by ensuring its expertise was more widely known, by expanding retraining facilities, by taking on more industrial research projects, and by developing expertise in new areas of need.

As a result of the report, Sheffield is in the middle of a series of new initiatives to boost the industrial connection. To encourage its consultancy work, the polytechnic has decided "as incentives" to allow departments and individuals to retain more of the income they generate through working with industry.

The polytechnic is to mount a major exhibition in the city during the autumn on the theme of "How the polytechnic serves industry". It is also to carry out two local surveys - one of the purchasing patterns of a sample of small and large firms to find out why they go out of Britain, let alone Yorkshire, for so many of their needs, and the other of the supply and availability of skills in the area - to prepare for the skills-led investment programme planned for South Yorkshire.

The polytechnic is also strengthening formal ties with the local authority and local business. To coordinate its strategy, the council has set up a new employment forum, with representatives from the trades unions, the chambers of commerce and the university as well as the polytechnic. A new micro-electronics education programme has both polytechnic and university playing important roles.

In addition, the polytechnic is involved in a project for silversmiths, jewellers and other craftsmen, known as the Leadmill Project, and two polytechnic staff went with city councillors to visit the Mondragon cooperative in Spain. Last week also, the council confirmed a £25,000 research project into energy conservation in buildings to be carried out by polytechnic staff.

Finally, the polytechnic has just unveiled a new department of external liaison and development as well as all its short course, consultancy and industrial work. One of its aims is to ensure the polytechnic's contribution to the steel industry is as high as it can be, and that many in industry remained slow in seeking advice from the polytechnic "perhaps because they do not perceive the need for outside assistance".

placements. Mr Brian Jeremish, the new department head with 20 years in the steel industry behind him, said: "The unit will look after research work, placements and advising firms all at the same time. We have to widen our dragnet if we are to continue to place everyone, which is of course bread and butter work for us."

But what actually happens at the exact point of contact between polytechnic and industry - the chalk-face meeting the coalface? One of Sheffield's recent successes came in designing new computer-run equipment for a small firm which had relied on traditional methods to produce tools for the production of steam irons. After being approached by the firm, Precision Manufacturing Services, engineering staff ran a short course for company staff, drew up a programme, worked with a company engineer for six months, demonstrated how the programme would work, and persuaded the company to install the new computer equipment.

The polytechnic did three things: it went out positively and sold its knowledge; it applied its knowledge to the company's specific problem to modernize its equipment; and it demonstrated on its own equipment the very programme would work. This is very much how the new industrial liaison department plans to continue to work.

Another project involved the testing of glass used in squash courts for a local glass supplier. Not only were a series of scientific tests devised to replace the old "throwing a bag of sand from 25 yards" approach, but polytechnic staff also redesigned the glass support frames to allow it to withstand greater pressure.

Other projects have included improving the production of plastics, devising tests for springs, speeding up the production of a grease lubricant, and advising firms on noise problems.

A major boost to the polytechnic will be the new impetus to aid industry coming from the town hall. Mr Bill Mickle, chairman of the council's new employment committee, admits the council has probably undervalued the importance of the polytechnic. "We have tended to regard it as a rather large, rather separate institution. Probably that has been wrong. We do want it to play a greater role in our strategy to help local industry," he said.

That strategy involves backing firms who are efficient but are suffering under the recession; providing workshop space and advice to sacked workers to set up their own firms; and to advise firms on new technology and marketing. On all three fronts, the polytechnic could play an important role.

The task of placing all the people all the time

This month saw the opening of the Government's inquiry into sandwich course provision, and one of the first questions put to universities and polytechnics was: "Does industry really want sandwich courses?"

Industry, of course, will be able to answer for itself at a later stage of the inquiry. Certainly, companies' immediate and willing support for Sandford University this week - in the face of the cuts - is evidence that the technological universities, which all offer integrated sandwich course degrees, have impressed them - if not the University Grants Committee.

On the face of it, the sandwich course system is tailor-made to ensure that higher education knows about and can provide the needs of industry, and that industry can at a very early stage influence the education and training of students and shape institutions' research.

At Brunel University, Uxbridge, all undergraduate students are sandwich course students, and in this respect it is the only university of its kind. Students spend six months each year for the first three years in industrial placement or carrying out some kind of professional training. The fourth year is spent at the university.

In higher education generally, there are 31 different patterns of sandwich courses with students spending a total of anything from six to 24 months on placement, depending upon the course.

At Brunel, this means that in any one year nearly 2,000 students leave the university in April for professional training in employment until October, when they return to resume their academic studies.

The organization of this is arranged by Brunel's Institute of Industrial Training, directed by Mr Alan Daniels. He has charted the advantages to the student, to industry and to the university of the sandwich course scheme.

By combining work experience with college studies, the student is able to integrate more closely theory and practice and to find greater meaning in studies. Motivation is increased because the students can see the connexion between their work and their subject. Students' maturity also develops more quickly as work experience provides the opportunity for exercising responsibility and judgment.

But crucially perhaps, students can examine realistically the careers open to them, and the work experience may help them at an early stage to decide careers, even to alter the emphasis of their degree work.

As for industry, it is possible - although not axiomatic - that new ideas can be introduced through the stimulation of fresh thinking, either from the students or from college tutors who are in touch with other organizations with similar problems. The potential employer can also train the student in the standards and practices of the company.

But according to Mr Daniels, the most important advantage for industry is the ideal way to approach recruitment. The employer can see the student in a work environment - a far more satisfactory arrangement than a series of interviews - while the student can assess the organization as a potential employer. Some 80 per cent of Brunel students eventually find permanent employment with an organization with which they have been placed as students.

Finally, the university benefits because the close contact keeps it in touch with new developments in research. The university can see the practical problems of applying theoretical techniques. Both students and lecturers have the advantage of using new equipment that might be beyond the reach of the college.

The enormous task of placing 2,000 students each year means that the university must keep in close and happy contact with industry. Some ten years ago, nearly 80 per cent of sandwich course students were industry based and sponsored, whereas now it is exactly the reverse, increasing the burden of finding placements.

The recession only exacerbates the problem, although it is still Brunel's proud boast that it is always able to find places for all its students.

Mr Daniels said: "We approach it like a marketing exercise. We have the names of 6,000 contacts on our books. We update that every three months. We send the firms bulletins twice a year, newsletters, calendars, Christmas cards."

"We invite employers to come to see us. We encourage them to use our equipment. Employers feel they are working in partnership with us. It is a long-term approach."

The university insists that the company provides an industrial tutor, someone who will supervise the student's work, ensuring that he or she is aware of safety regulations, and is someone to take problems to.

Ultimately, the choice of any placement is the responsibility of the academic tutor, whose chief concern will be to ensure that the work experience and academic course are an integrated pattern. "If we discovered that a work placement was unsatisfactory or that a student was being used as cheap labour as opposed to being given training, we would take him or her away and place them elsewhere."

The academic tutor visits the student in placement twice during the six-month spell, and all students return to the university for one day to swap experiences with their colleagues.

The "satisfactory" completion of the professional training section of the course is mandatory and is assessed by the academic tutor. A student's degree can be withheld until this has been achieved. Part of this process includes a report on the student from the industrial tutor.

This question of assessment in and by industry and its status as part of a degree scheme is a vexed one. In some institutions, marks are awarded which count towards degree classification. Obviously, there are factors such as the personality and competence of the industrial tutor and work conditions - factors beyond the student's control, but which may influence assessment.

In 1975, the Universities' Committee on Integrated Sandwich Courses set up a panel to try to evaluate information on the status of assessment and to suggest ways in which it should be conducted, but the panel was unable to reconcile opinion among either universities or industry. Presumably, "satisfactory" completion can mean as much or as little as is necessary in each particular case.

A student on placement is paid a wage, negotiated by the employer and university and funded in one of three different ways. The employer may be prepared to pay, and will receive no special help. An employer may get help from an industrial training board or the Manpower Services Commission. (In this way, the Government makes a small amount available each year to pay towards salaries and overheads involved in taking on students in areas of national special need.)

In other cases, a local authority grant can be extended as long as the student is taking up unpaid employment which is recognized as training, and this applies particularly in the health service.

In the current Government inquiry, higher education institutions have been pressing for more Government money to promote placements. Some institutions have been changing sandwich courses to more traditional courses because there are so few jobs available in the recession. In the past, sandwich courses have survived because either the private or the public sector was being hit. Now it is both at the same time.

Nevertheless, the technological universities consistently come out top in the "jobs league" - a fact which proves, they say, that they are doing what government is always exhorting them to do: to relate higher education to the needs of industry, and those of society in general.

As Alan Daniels said: "An engineer is a practical person. He or she has to be able to do things with his hands. That is our objective."

Recent riots in our cities had a stark common denominator - all of them involved unemployed youngsters in deprived areas. They amply demonstrated that senseless violence may be the first resort of a generation facing a seemingly hopeless future.

The Youth Opportunities Programme has in three years attempted to stem the tidal wave by putting some of them on the road to employment via bursts of education, training and work experience.

Yet by being constantly forced to respond to quantity, the programme's attempts to capture the elusive element of quality vital for a proper foundation and not a superficial gloss of training, has not yet seen fruition, as is clearly demonstrated by programmes of work experience on employers' premises.

Achieving quality may not, however, be so remote with the Manpower Services Commission facing, according to latest forecasts, a total of some 800,000 unemployed teenagers by next year who the latest expansion could not contain. Only a gigantic leap in size or a complete metamorphosis could make the programme cope, and both are equally likely outcomes of Mr Jim Prior, Secretary of State for Employment's recent £1 billion tussle in the Cabinet.

Either way will probably result, for political reasons, in a longer programme and a more definite period of education, training and work related experience which Mr Prior was keen to see as part of both YOP and the New Training Initiative.

The groundwork on improving in quality has already begun and two research projects are bound to have a major impact.

One is the Youth Skills Action Research Project. The Institute of Manpower Studies at the University of Sussex is, under the direction of Mr Christopher Hayes, developing a one-year foundation traineeship of vocational preparation for under 18-year-olds which in 1982 could form the keystone of any new programme for unemployed youngsters.

The other project is being undertaken by the Institute of Education and the Royal Institute of Public Administration with funds from the MSC and the Nuffield Foundation and support from the Department of Education and Science.

It is an in-depth study examining the arrangements whereby education and training is provided under YOP. When completed in 1983, it will undoubtedly provide advice on the management of any future programmes.

For Mr Hayes, the IMS project is the realisation of an ambition he has had since 1975 when as deputy chief executive of the Training Services Agency, he produced a booklet on vocational preparation which should have been the beginning of a general vocational year for young people whether at work or not.



Trainees gaining work experience



Working towards quality

Patricia Santinelli looks at two research programmes which will have a major impact on Government schemes for unemployed young people

He is convinced it is not too late to create a national framework for a one-year traineeship suitable for the 1980s with a recognized conclusion.

He believes it is vital that the extensive and varied experiments which have grown under the YOP should be absorbed under such an umbrella to create a more effective, organised permanent programme.

"Such a framework must be capable not only of operating on a very large scale but must sustain the twin objectives of raising the level of competence and flexibility of our labour force, and at the same time equip young people to better face a hostile labour market and cope with personal uncertainty", he said.

"This is highly necessary, he feels, when 44 per cent of young people are condemned to a scrapheap now that jobs such as office clerks and messengers requiring half an hour's training have disappeared.

Under the traineeship young people would be placed with employers and organizations which at present provide work experience or training. They would be taught a broad but clearly identified set of skills: under an approach which has grouped together occupations which have strong similarities. This would give each youngster a foundation for work and open wider job opportunities.

Young people in training would not be solely equipped with what he describes as "product" skills such as

typing and filing but would be given grounding which emphasized "process" skills such as teamwork and problem solving.

Achievements would then be recorded in a certificate intended to represent a passport to further education and employment.

The certificate would have three parts: it would monitor achievement in one particular group of skills; it would give an assessment of the "process" skills; and an "endorsement" would record achievements at higher level.

But Mr Hayes warns that it would be irresponsible to link expectations of employment with the completion of a traineeship. "Its results should be measured by its success in achieving greater standards of competence and not, like YOP, in the success rate of getting any kind of job," he says.

Work on the first of the three components - occupational families, local labour market training opportunities and training outlines - which form the model of the traineeship framework has already been completed.

Mr Hayes says that they looked at 40 different ways of constructing occupational "families". They studied other European systems, in particular Germany's, and eventually produced a list of 11 families which cover occupations ranging from administration, agriculture, construction,

craft design, manufacturing, personal services, and community health, to technology and transport.

The second part of the project - to identify training opportunities in the local labour market and issue guidelines of practical use to organisers - is now in progress.

"There is evidence that for most young people the range of training and employment available is determined by opportunities in their areas," said Mr Hayes. "Therefore it is very important that the constraints of the local labour market should be minimised and its potential fully realised, so that you arrive at an optimum between what young people need and what is actually available."

A very real difficulty is that local employers do not have a mouthpiece, unlike other countries, so to know what employers have on offer you have to visit each one.

One aspect of the work on the training outlines that still lies ahead must be to ensure that methods of training and further education and the structure of work experience puts a heavy premium on the preparation of young people for an uncertain future.

"We were thinking of proposing that everybody should learn computer logic, experience on keyboards and VDU's and simple programming because these are now commonplace," he says.

The Institute of Education and the

RIPA project which is to cost some £70,000 over two years is very much in its infancy.

Its chief purpose is to illuminate the processes whereby the YOP as an emergency initiative of central Government has generated new terms of provision for 16-year-olds, previously outside the scope of post school education and training.

Basically it is hoping to produce findings which will contribute to an understanding of central/local government relations and of the administrative practices through which educational innovations may be rapidly implemented.

Mr Steve Butters and Mr Paul Richardson, the two research officers working under Professor Tony Blackstone at the Institute of Education say that one of the advantages of the investigation is that it is taking place at a time when YOP is being expanded once more.

"This will give us a first-hand impression of how central and local government cope with the increase and keep on top of new administrative and managerial demands that are made. So far they have," he says.

The project is concentrated in metropolitan authorities and in counties within Merseyside, the West Midlands, the South East and Bristol Channel, including Wilt. These were chosen in consultation with the MSC to ensure that experience and problems with YOP are examined in very different areas.

It began in February but has meant that the first phase of looking at accountability is being completed concurrently with the second one which is examining education issues. The third stage is to look at effectiveness.

In the first stage they are looking at what arrangements and standards lead providers of education and training within the YOP to fulfil responsibilities to the MSC, education service and the community.

In the second they are examining in what ways providers are encouraged to produce services which are integrated with other MSC provision, aligned with other education service activities and related with broader themes of youth policy.

Finally they will investigate providers assess their effectiveness, changing the capabilities and skills of trainees for obtaining employment, coping with a job and developing a social career.

So far the investigation has revealed an uneven pattern of provision with some L.O.s far in advance of others. It has shown too that some providers have absolutely no idea of the real nature of YOP.

But the research officers stress they are not only looking at authorities but at the role of voluntary organizations to see how they develop education and training, what sort of styles they have and whether they use colleges or other organizations.



Humphrey Spender's photographs of Bolton and Blackpool nicely sum up the original Mass Observation project

Local difficulties in the British economy are reviving one or two nasty memories of the 1930s these days. But 1930s revivals do not all have to be bad. At Sussex University this summer a professor of anthropology is reviving Mass Observation, one of the period's quirkiest intellectual crazes, of which the *Daily Herald* told its readers: "You can have fun with this new science".

Professor David Pocock, director of the university's Tom Harrison Mass Observation Archive, is proud that the *Herald's* verdict is as true today as it was 40 years ago. Admittedly in the archive has been rising steadily since he began his Mass Observation revival in the spring.

Inflation is the unlovely subject of Professor Pocock's study, but the subject of Mass Observation research has never been all that important; the appeal lies in its method. And its method, boiled down to essentials, is to ask ordinary members of the public to become their own social scientists, surreptitiously observe what other members of the public are doing, and report the results to Mass Observation's headquarters.

Mass Observation was founded in 1937 when correspondence in the *New Statesman* brought together two unusual men. One was Charles Mudge, a poet and *Daily Mirror* journalist who went on to become a distinguished professor of sociology. The other was Tom Harrison, the charismatic Old Harrovian with a reputation as an ornithologist, anthropologist and sociologist.

One of its first pamphlets in 1937 put Mass Observation's aims this way: "How little we know of our next door neighbour and his habits; how little we know of ourselves. Of conditions of life and thought in another class or another district, our ignorance is complete. The anthropology of ourselves is still only a dream. It is left to the intuitions of men of genius to cope with the unknown mass. Such intuitions are to a human science of the future what cookery is to chemistry."

Mass Observation was to be a scientific study of human social behaviour, one which would apply the methods of anthropology not to distant and exotic peoples but at home. Mass Observation volunteers were to observe the social reactions of ordinary people to events like the abdication of Edward VIII and King George's coronation. Mass observers would be "the meteorological stations from whose reports a weather map of popular feeling can be compiled."

In the charged atmosphere of the late 1930s Mass Observation caught on immediately. Literary and left-leaning people were eager to be part of the new, involuntary movement and to be systematically mislabeled as "public opinion" by the media. At a time when the public on issues like the abdication of Edward VIII and King George's coronation, Mass Observation seemed a way to establish what was really happening in society and to tackle the sensation of powerlessness.

Peter David reports on the revival of a quirky intellectual craze asking members of the public to be their own social scientists

Mass Observation was also great fun. Under the influence of the ebullient Tom Harrison, intellectual like Humphrey Spender the photographer, and writers like John Somerfield and Bill Naughton covered every conceivable aspect of the town's life for the *Worktown Project*.

Charles Mudge meanwhile set up a network of ordinary people who sent in diaries recording their activities on the twelfth of each month. Their observations complemented the reports of Mass Observation's "mobile squad" of full-time observers. Later, observers were sent directives and asked to report on particular topics, ranging from smoking and happiness to wartime issues like pacifism and gas masks.

During the war the literary side of Mass Observation, which had produced such oddities as the collective poem produced by 12 Oxford undergraduates who tried to fuse the images they had observed, had dwindled. But the organization had built up an incomparable network of ordinary people who sent in their diaries and reported on local conditions in response to a stream of directives sent out from Tom Harrison and his headquarters staff. In 1940 Harrison placed the organization at the disposal of the Government and in the early years of the war it provided the home intelligence department with invaluable reports on civilian morale.

Later in the war Tom Harrison, now a member of the Special Operations Executive, was parachuted into Borneo and was to remain in South East Asia for most of his life, infrequently returning to Britain. On one such visit in 1960 he gathered most of the observers who had visited Bolton before the war and returned for a follow-up observation.

In Harrison's absence, however, Mass Observation drifted steadily from its original goal of establishing a democratic "anthropology of ourselves" and became increasingly concerned with market research, eventually turning into a commercial organization.

Before ceding his rights in the organization, Harrison gained control of all the pre-1949 material. In 1975 he gave it to the University of Sussex and was offered a chair. Before he could take it up, however, he was killed in a car accident.

His death left the University of Sussex with responsibility for the mass of papers, diaries and photographs which had been produced by Mass Observation before and during the war. It was a unique source of social historical material but most of it was in appalling condition, stored base-catalyzed cardboard boxes in which had the London company Ltd.

Mass observatory



Humphrey Spender's photographs of Bolton and Blackpool nicely sum up the original Mass Observation project

Professor David Pocock took over as director of the Sussex archive. His first task was to supervise a three year conservation programme funded by the Social Science Research Council and designed to rescue and preserve the thousands of sheets containing reports, diaries and directives collected by Mass Observation between 1937 and 1949.

A specialist document repairer was employed to clean, de-acidify and laminate badly damaged papers and the archive's secretary, Ms Dorothy Wainwright, began the process of cataloguing and reorganizing the contents of the boxes.

In May, however, Professor Pocock realized a cherished ambition and began to bring the dead archive back to life. Letters in the press, reminiscent of those which appeared four decades ago, announced that a Mass Observation study of inflation was about to begin and that ordinary people were welcome to become observers and reporters.

More than a 1,000 people responded. Each received a letter from the archive inviting them to become observers, keep records of their daily lives and send in notes and comments which they thought would be useful. A first "directive" invited observers to report on reactions to the new £1 coin, to the Royal Wedding and to the price of vegetables.

In a covering note Professor Pocock added: "Nothing is too trivial and you will be surprised. I think how quickly your eyes and ears become attuned. Let me give you an example. Last week two men ahead of me in the Post Office collected their pensions and I saw them again in the greengrocer's discussing the price of a cabbage. One said 'Still, you can't do without it, it makes a meal.' And it's cheaper than a joint eh?' The other replied 'Meat? I scarcely ever eat meat nowadays.' This goes into a notebook..."

Professor Pocock is unrepentant

about reviving a movement which more fastidious social scientists tend to regard as a colourful but unscientific oddity of the 1930s. He believes the social sciences are now more receptive to methods which do not imitate the natural sciences. He was much more worried about whether the will and ability to write letters and keep diaries had diminished since Mass Observation's golden days in the 1930s and 1940s. In the event, the vivid responses received from around 1,000 people of all ages and social classes has delighted and excited him.

Quibbles about Mass Observation methods are, in any case, slightly beside the point. The Sussex archive is a rich quarry for social historians and scientists alike. The history of the civilian front during the last war written by Angus Calder is only the most obvious example of recent work based on the archives. And the development of computer techniques has now enabled researchers to use the material in ways which would have been beyond the scope of its 1930s progenitors.

At Sussex University, for example, the Science Policy Research Unit is using the diaries in the archives to match up with budget surveys conducted during the 1950s and 1960s. It is part of a large project looking at the impact of changes in the economy, and without the archive material it would have been impossible to take the detailed analysis of people's daily behaviour back into the 1930s.

Fortunately for the researchers at the Science Policy Unit, Tom Harrison had asked his observers and diarists to keep detailed records of their activities during the day, and the times they were begun and completed. Why had he asked? "It was just the instinct of an anthropologist," says Dr Jay Gershuny, a member of the unit.

Instinct, hunch, and imagination guided the Mass Observers of the 1930s, and even if they never achieved the "democratic" social science they sought, they at least left an incomparable archival source for later scholars. Now the archive is growing again.



Best buys in the Australian education marketplace

For long-term, profitable investment, few capital portfolios can beat formal education. But, if it is straightforward financial gain that attracts the student, professional qualifications represent the "best buy".

Research carried out at the Australian National University shows that expenditure on professional courses gives an amazing rate of return of up to 90 per cent per year. In contrast, according to researcher Mr Peter Miller, a bachelor's degree provides a rate of return of only 20 per cent, taking into account not only their higher salaries but also the lower probability of unemployment.

The payoff from the extra years of education isn't the only advantage which accrues to graduates. According to Mr Miller, there is evidence that people pursue additional education partly to increase the chance of them marrying a more educated spouse. If the likelihood of marrying a graduate as a result of going to university is taken into account, the rate of return increases by another 5 per cent.

On the other hand, if a graduate chases a higher degree, rather than a prospective wife or husband, then that tends to be a much less profitable investment largely because of the extra income post-graduate students forgo to continue their studies.

For his research, Mr Miller used income data cross-classified by age, sex, school leaving age, birthplace and hours worked obtained from the Australian census. He said that the rate of return for graduates in Australia was higher than that in countries such as the United States and Britain.

Oddly enough, and for reasons which are not yet clear, Miller's study shows that compared to the rate of return on education obtained by Australian-born males, males born elsewhere obtain a lower rate of return. Overseas born females, too, tend to receive a lower rate of return than Australian born females. Generally, returns for males exceed those for females although the percentage differences are small.

Mr Miller plotted graphs of income against age for men and women (Australian and overseas born) for eight education levels - those who left school aged 15, 16, and 18, and those with diplomas, bachelor degrees, graduate diplomas and higher degrees. Distinct differences between the graphs for the different sexes are evident and, for males, five characteristics stand out:

As might be expected, the better educated tend to have higher starting salaries than the less educated. Second, irrespective of the level of education attained, earnings increase with age up to a maximum sometime after the age of 35.

The higher the level of education, the later the age at which maximum earnings are reached. This shows up best when people with and without tertiary qualifications are compared. For example, the earnings of an Australian born male having no tertiary qualifications and who left school at 18 peak around the age of 35, while the earnings of someone with a bachelor's degree peak at 55.

The higher the educational attainment the steeper the age earnings profiles during early working life. According to Miller, this suggests that the better educated receive more on-the-job training than the less educated.

The decline in the age income profiles in the last one or two decades of a person's working life is a puzzle, said Mr Miller. But they may be the result of two factors. One is, in part, the result of a "confounding of labour-leisure choices with the returns to human capital". In brief, the older a person gets, the more he tends to opt for leisure in lieu of work. For example, 40 to 44-year-old Australian born males who left school at 16 worked an average of 44 hours a week.

Geoff Maslen

Charlotte Barry visits the Thomas Coram Research Unit which prides itself on its non-academic appeal

Child's play under scrutiny of researchers

In pride of place in Dr Barbara Tizard's office at the Thomas Coram Research Unit is a silver rose bowl presented by the National Association of Nursery Matrons.

The bowl is awarded annually for services to young children, and in the past it has always gone to practitioners. Dr Tizard, the unit's director remarked: "It was very much appreciated. I thought it was rather nice that they should see research workers contributing in that sort of way."

The gesture confirms the way the unit's research into the health, education and development of children and their families has made its mark outside the academic community.

The deliberate policy of the London-based unit not to gear its results towards a purely academic audience has also given it a distinctive place in the research world.

The unit specializes in research which is addressed to specific problems. It prides itself on discussing its findings widely with practitioners and attempting to learn from their reaction.

This approach is strongly supported by the Social Science Research Council, which already funds other major psychological studies on youth and a special project on children in care. Last year the SSRC made the Thomas

Coram unit into one of its five designated research centres, which means it will receive an extra £100,000 a year for the next eight years.

The unit was established in 1974 by Dr Jack Tizard, the present director's husband, who died two years ago. As professor of child development at the Institute of Education he built up a research reputation second to none. One time president of the British Psychological Association, he was also a long-serving member of the council of the SSRC and chairman of its educational research board.

As professor, Dr Jack Tizard longed to shake off the administrative load and get back to research. After lengthy discussions with the Department of Health and Social Security, to which he was an adviser, he persuaded it to set up a research unit concerned solely with children's problems.

The unit is based in Bloomsbury, within earshot of the children's play area in Coram's Thomas Coram Foundation, from which it rents its premises. It is part of London University's Institute of Education.

Next door is the pioneering Thomas Coram Children's Centre, which was set up simultaneously by Dr Tizard to provide a working model of an integrated education and day care centre for the under-fives. This provides a free service for local people (not just problem families) and was the subject of a detailed study during its first five years.

The Thomas Coram unit has always con-

cerned itself with both normal and handicapped children and much of its research looks at the planning and range of public services for children and their families. It also examines the assumptions on which policy is made.

However, it has always concentrated on primary and pre-school age children - the area its staff knows best. "This may be influenced by the fact that the unit is staffed by people with very young children and not adolescents," said Dr Barbara Tizard. "Perhaps as they grow up our interests will move on."

Having a research staff mostly in its early 30s has put an extra burden on the work of the director and her deputy Dr Chris Kiernan as there is a shortage of senior staff. Although the DHSS provides the bulk of the unit's £200,000 budget (supplemented by the SSRC tenured posts out of a total of 30 are provided by the Institute of Education. Since Dr Tizard succeeded her husband, the post of reader had been frozen.

After years as a full-time researcher in child development and pre-school age children, Dr Tizard obviously has mixed feelings about taking on the role of administrator. Yet in spite she is not a "committee person" she has been instrumental in organizing regular meetings of directors of the SSRC designated research centres to discuss common problems.

The diverse research interests of the unit reflect the multi-disciplinary interests of its staff which includes psychologists, sociologists, nurses, statisticians, paediatricians and communication scientists.

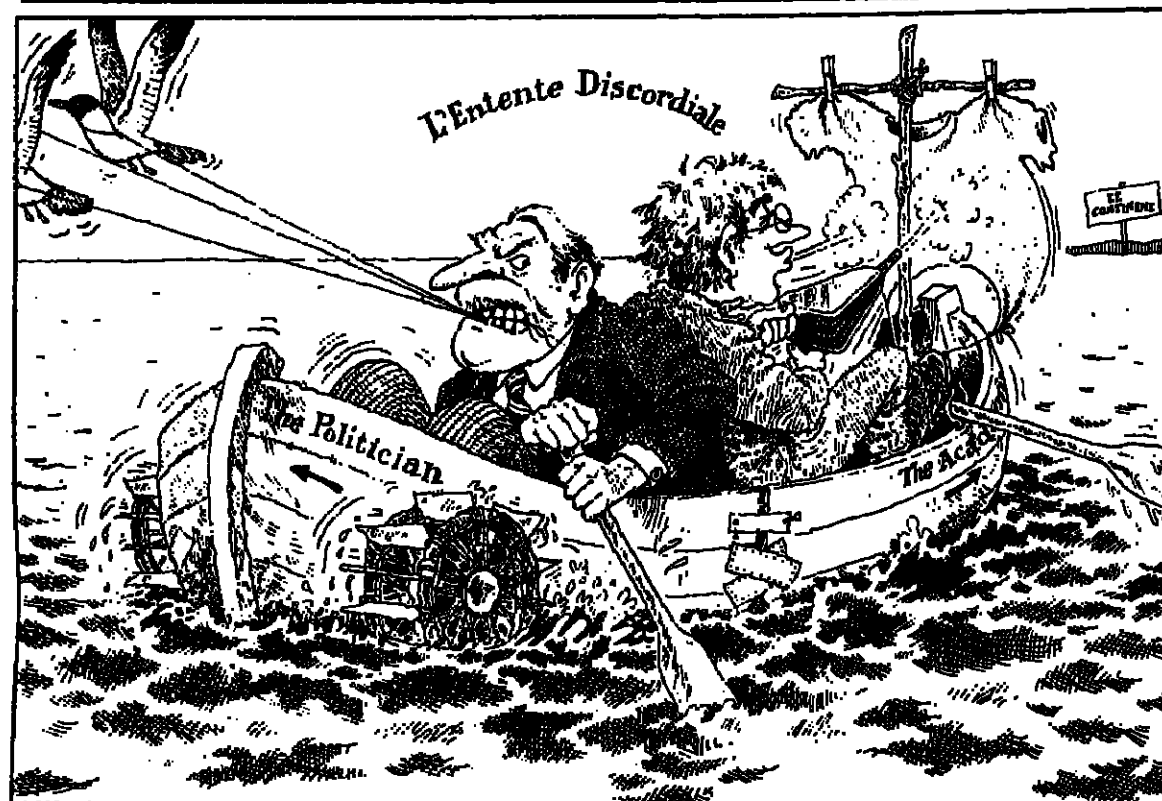
Current projects cover primary school health, short-term residential care for severely handicapped children, transition to secondary school, the education of children in hospital and children's needs out of school.

The part designated by the SSRC is concerned with three new projects, the last of which gets off the ground this autumn. These concern the health and inequalities of medical provision for families with young children; a pioneering study of children looked after by relatives such as grandmother; and a look at single parent families which will start this pregnancy.

As well as using the usual channels of articles in books, academic journals and practitioners' magazines, the unit likes to disseminate its findings through a series of open seminars and meetings.

Dr Tizard is aware of the danger of a research unit becoming too inward-looking and tries to counteract this by bringing in outsiders for discussions on key issues.

Next year the unit is planning a series of seminars on race issues. Open meetings search and parent action on family policy and have included a group of public services of the Association of Nursery Matrons, the order of the rose bowl, which participated in discussions about a completed project on children in the care of childminders.



Going into Europe

Ten or even five years ago the pages of *The Times* and the learned journals regularly carried articles about the development of degrees in European studies. Indeed *The Times*, like the European Commission, thought it worthwhile to co-sponsor conferences on the phenomenon with UACES, the relevant professional body. Things are different today. Conferences have been rare and there has been even less published discussion of the field. Other things also suggest that the subject is no longer considered to be as pertinent as it was.

Many people would assume that this meant that European studies courses had faded away. They would no doubt ascribe all this to the effects of Britain's new coolness towards Europe. They would be quite wrong. Whatever the level or intensity of public debate, European studies degrees are still many and flourishing. And though there are problems, these cannot be explained by superficial references to the political climate.

In fact European studies has always been as closely linked to the development of higher education and the curriculum as it has been to the EEC. British involvement with the community has been only one of the factors affecting its growth. Consequently a British withdrawal from Europe would not necessarily have as dire consequences for the field as might be thought. Indeed, some emerging trends in European studies enable it to face such a future with some equanimity.

A recent conference - mounted by UACES with the assistance of the School of European Studies at Lancaster, full details of which will be published in a future number of the new *Journal of Area Studies* - provided evidence to suggest that absence of debate is a poor guide to the state of European studies. It showed that the field is a healthy one and that the lack of debate was not just a product of anti-EEC blues. Similarly it made clear that while there are problems ahead these too are less political than organizational. Indeed, the former may be more easily solved than the latter.

European studies has now established a real place for itself in both schools and universities. If some colleges and universities have dropped out, others, like Aberystwyth and Dundee, have recently taken their place. So it is now taught in a third of all universities as well as in half a dozen polytechnics and four colleges of higher education. If the official statistics were organized so as to show actual courses taken, it would no doubt appear that the number of students reading European studies is still growing. And, after a long period of gestation, many Continental countries are showing a new interest in such multi-disciplinary ventures. In addition there is a vast amount of research and teaching on contemporary European integration

Is the waning of enthusiasm for the Common Market a threat to European studies degrees in Britain? Clive Church thinks not.

to be found inside degrees which do not consider themselves to be European studies.

The fact that this flourishing situation is all too often overlooked is due in part to the passage of time. European studies is no longer an exciting proposal with an air of the unknown about it. It is a reality and since academic fashion is as cruel as any other yesterday's innovation has become an ignored part of the furniture of higher education. The years that have gone by have also been replete with financial problems, attention has in any case been directed elsewhere. Obviously the fact that entry to the community was also achieved and ratified at the same time has also played its part.

Too much stress, however, should not be laid on changing public attitudes to the community as a factor affecting European studies degrees. The community, and British entry therein, has only ever been a necessary condition for such schemes, not a sufficient one. Their roots also lay, as many of their founders were clearly aware, in the general urge towards inter-disciplinarity in the 1960s. In particular questions about the contexts in which languages and, to a lesser extent, the social sciences should be taught played a large part in the evolution of European studies degrees. Rather than being due simply to Marketphiles in search of converts, such degrees also came from inter-disciplinarians in search of a focus. One such might have been the Commonwealth, but since this was fading politically, Europe got the vote.

The fact that degrees which are not dubbed European - and indeed often resist the title - do much the same things as European studies reinforces this relationship with broader curricular change. Many recent modern language courses are akin to European studies schemes in their preference for more practical and social science-related language work. Given that the number of students with two languages and one other subject is falling, and that of those with two social sciences and one language is growing, especially among women, this trend is likely to continue. And happily so, for teaching about Europe remains as vital as doing European studies. No one wants to see learning about Europe restricted to a neatly labelled ghetto with unjustified aspirations to becoming a discipline in its own right.

This said, there is still some residual dyed-in-the-wool opposition to European studies as such. Much of this, however, seems to be due as

much to competition for resources as to objections of principle.

Such structural and institutional problems account for much of the variation between degree schemes. Universities, with their larger staffs, have mainly opted for courses with distinct subject specialisms, whereas most polytechnics and colleges have chosen more integrated schemes with less choice. Where subject matter is concerned, on the other hand, there is growing uniformity. Most courses offer a new *trivium* of language, social science (and/or literature) and a comparative European element. This last is not just a study of the community. Hardly any courses nowadays, if they ever did, restrict themselves wholly to the Common Market or the post-1945 world. The vast majority see things in a broader and longer perspective, in line with the liberal roots of European studies degrees.

Analysis of existing courses also suggests that more attention is now being paid to divisions inside Europe. Awareness of such differences and of the nature of the still fiercely competitive nations who make up our continent is a hopeful sign for the future. Obviously the second enlargement of the community will make such differences more salient as things are. It can also be argued that a knowledge of the European nations and of what divides as well as unites them, would be of even greater value to this country if we were to disengage from the community in any way. If this happened we would need people whose skills would surmount the new barriers which would surely arise, so that international and commercial contacts would be maintained without the benefit of the community structure.

So if the atmosphere surrounding European studies is changing, the end is far from nigh. There are obviously problems, notably economic and institutional ones. But it is now much less easy to make polyvinyl vocational claims for broad European studies degrees; although the development of courses involving science and business studies is another hopeful sign. Again, there is continuing tension between languages and other disciplines, uncertainty about the range of subjects to be covered, disagreement about the extent to which Britain should figure in the syllabus and difficulties over relationships with schools and teacher training. Nonetheless, the future is secure. If there are challenges as in the past, these seem more likely to emerge from inside higher education than from political attitudes. Given the will, the winter of discontent towards Brussels can be endured, and the real challenge lies in the glacial blasts blowing from Elizabeth House.

The author is deputy director of the School of European Studies at the University of Lancaster.

The benefits of the in-service BEd

Teachers, local education authorities, colleges, polytechnics and universities are all concerned with getting something out of the in-service bachelor of education degree. Yet the largest number of people affected hardly get a mention - school pupils. The acid test, so rarely applied to many aspects of the teacher training, whether initial or in-service, is just that - are the children and young people any better served? The answer for the in-service B.Ed is yes.

That's just as well because it's a fairly large business. By now there are 8,000 teachers with bachelors of education degrees and another 7,000 are following the course. That may not seem a large proportion of the total number of teachers in schools, but as an entry in the in-service record it is a highly significant figure.

The answer yes is not based on direct observation of improvements in classroom teaching by teachers who have completed the degree. It is based on what the teachers say of themselves when they have finished those studies, corroborated by heads of schools where they teach and by some Inner London Education Authority officers and advisers. In some ways it is not a predictable answer. It even seems unlikely judging by some things teachers say as teacher-students when they begin the course. For many, it looks like a long hard grind on a part time course - there is little point in talking about full time courses as a general provision - involving usually two evenings a week after a full teaching day with the inevitable tensions arising between study, the needs of pupils between studies and domestic demands as the week begins to pile up. Now that the connections between graduating and finding promotion are so tenuous, teachers are unlikely to gain many career benefits from studying. So in the early stages of the course some teachers wonder just what they are doing.

For many, however, there are substantial changes during the course. They get caught up in the study, and find personal and professional satisfaction in knowing that they are learning. A sense of achievement grows. Something which they know they have owed themselves is being paid. The way they reflect on the course when it is over confirms all this.

Their comments about their development can be grouped broadly under six headings: confidence; competence; reflection; relationship; theory and further study. Obviously there can be no such neat divisions, but the thrust of remarks in each of those six directions is clear.

Confidence is perhaps the most important dividend of all for teachers who have completed the in-service B.Ed course. For some it's straight autobiography - a personal goal reached; a dream realized. For others it's a sense of intellectual achievement. Many will talk of the difference it makes in their dealings with colleagues, advisers and parents. They feel more sure of their ground, better able to explain what they are doing and why, and so more able to discuss things openly. This kind of confidence merges into feelings of greater professional competence in making judgments about work schemes, about expectations of standards and about using books and reports for trying to solve teaching problems.

A good deal of reflection is implied in those comments about increased professional competence. And again the evidence is clear. Many will say they recognize that they are thinking systematically about pupils in relation to teaching materials - about trying to distinguish the more important from the less important issues of teaching and being able to consider fundamental matters without the anxiety which previously closed them off in consideration, as too threatening an inconvenient. Mixed ability, role curriculum review or the colleagues are examples. Whether for an even or pupils, this

approach to professional relationships is clear from many remarks that it is the results of academic study is for teachers to think more before taking action. And as a general impression about the value of this award-bearing course for experienced teachers, it is important to note that so many are thinking about continuing their studies through masters' studies.

For local education authorities this suggests that the in-service B.Ed is a good financial investment. Every one of those sets of comments means better service for schoolchildren. The comments from teachers' heads and local authority officers gives more strong evidence of its value to them as employers.

One of the continual problems of award-bearing courses for teachers is that too often they appear to be offering benefits for individuals without necessarily answering any of the in-service requirements for the education authority as it regards its statutory responsibility for providing suitable education for the pupils living in its area. Both teachers who have completed the course and local authority officers and advisers with knowledge of those teachers, make it clear that the in-service B.Ed degree course is capable of answering both the staff development needs of employers and the development needs of individual teachers. Evidence comes from three directions. Some teachers are used as resources for staff development programmes within their own schools and sometimes within an authority. The newly qualified bachelor of education can become a kind of in-service teacher. Rather more often a course meets the needs of employers as they consider their schools and the teachers simultaneously through the options a teacher can study.

The benefits for colleges and universities are obvious. Registrations for the in-service B.Ed contribute to student numbers; and direct contact with experienced teachers can challenge higher education hesitations in perilous uncertainty about tertiary education then this is especially surprising. While parochial debates continue about the future of the 16-19 age group - in or out of secondary school - and the possibility of sixth form and tertiary colleges, the grim fact remains that some universities and polytechnics may have no future at all. British higher education could learn a great deal from the growing pains and mature success of such an important movement in the English-speaking educational world.

While the community college movement's history began in the late nineteenth century it is the last decade that offers the most instructive comparison for Britain. However, in order to understand two major factors of its development prior to 1970 must be briefly noted. The first is its original function. "I really wanted to go to a four year but..." For Darlene now and for all students, past and present, the ultimate or college has been the ultimate, prestigious goal. The "two year" colleges originally developed to provide a combination of "terminal", simply post-high school courses and "transfer" courses, the latter allowing students to move "up" with advanced standing to a four-year school. "I'll love to go out of two to school but..."

Norman Evans assesses the achievements and drawbacks of the new teachers' degree

The college gave her hope and renewed her natural optimism as her words, words which punctuate this article to emphasize its themes, certainly demonstrate. When asked to write about her reasons for attending the college she began with the same breezy casualness as she used in conversational. How many black British students feel the same or have the chance to express themselves so naturally?

To someone knowledgeable about British education a "community college" is one of two distinct things; either an urban secondary school with special adult and recreational facilities or a rural school usually modelled on the "Cambridgeshire village colleges"; in other words an intriguing educational experiment of, so far, minor importance. To most Americans a community college exemplifies, in general, the extraordinary expansion of higher education and, specifically, stands for the most dynamic and fastest growing area in that movement.

It symbolizes the American dream of making higher education, and so upward social mobility, available to all. The evidence showing how fundamental this faith is lies in the fact that during the 1970s a new community college opened somewhere in the USA almost each week. The number of students attending community colleges grew from 1.82 million in 1968 to 4.2 million 10 years later. This expansion has meant that proportionally higher education in the USA is now shared between the universities at 25 per cent, four-year colleges at 40 per cent and the community colleges (or "two-year colleges" as they are also described) at 35 per cent; before the Second World War only a few hundred of the latter existed.

Such awesome rapid growth has inevitably meant that weaknesses exist in these institutions, and, in the movement as a whole, but its real significance is as evidence of the support for the colleges by educators and of their success with students. Despite this achievement, however, they receive little attention in British higher education hesitations in perilous uncertainty about tertiary education then this is especially surprising. While parochial debates continue about the future of the 16-19 age group - in or out of secondary school - and the possibility of sixth form and tertiary colleges, the grim fact remains that some universities and polytechnics may have no future at all. British higher education could learn a great deal from the growing pains and mature success of such an important movement in the English-speaking educational world.

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That "but" represents the second major factor, a social and economic one. Traditional, residential college has always been extremely expensive so there was a real need for community schools. The community colleges adopted this function, allowing students to live at home and even work, reducing costs for all parties and opening up higher education to a vast new student market. This cru-

cial role was gradually recognized by all levels of government and the 1940 President's Commission on Higher Education stated that the colleges should offer "... educational service to the entire community and this purpose requires... a variety of functions and programs." This led to an increased development and a significant change of name from the pre-1940 "junior" college to the present "community" college. This implied building a college within commuting distance of each community and a pioneering state like Florida began a state-wide construction programme in that category by 1969. Other states began to follow suit, but immediately after the disturbance of the 1960s the Federal Government dramatically increased its support and the states speeded up their building programmes having identified education and the community colleges in particular as offering the best way of remedying the social and radical problems that produced the unrest.

It's a good start for me to start from scratch." It was against this background and under intensive pressure that, as part of their expansion in the 1970s, the colleges considerably broadened their definition; as well as their other functions they undertook the responsibility of providing all students with a "start from scratch." The community college took another term into its increasing vocabulary of "mission" a word that represented the social and remedial objectives that were the legacies of the 1960s.

An outstanding, nationwide feature of the community college movement has been the development of

A developed sense of community

Andrew Goodmyn outlines some of the lessons to be learnt from the American community colleges. Certain features, he concludes, particularly their adaptability and range of functions, might well provide a working model for any British tertiary college.

established a campus at all as in Vermont, where classes were taught wherever there was a combination of enough students and demand, rather like the British extra-mural or WEA branches.

Other sections of education, especially the universities, have questioned the status of the colleges regarding them as only pseudo-academic and their degree credit courses have therefore become of suspect value. The dilemma for the colleges is that such courses are always funded and attract additional financial support from the state board. Their mission, however, requires that they develop more courses for the non-transfer, the "terminal" student, especially an increasing proportion who enter college needing remedial help. Many of these were ex-high school students who either failed to graduate or did so without reaching a level of even basic competence. The colleges were put under pressure to absorb these students as they were unemployable, thus the mission became a social necessity, a mission to give students the basic skills they required to find a place in an increasingly complex society.

A similar function but with a different emphasis was to help minority and immigrant students. Darlene wrote: "I really wanted to go to a four year..." but when you slow you down... In other words you do the best you can at the time. For a speaker of black English like her the college offers a chance to learn the language she identifies with social mobility as well as an opportunity to improve the general level of her education. It does not deny her individuality or her ethnic background but gives the basic skills that a high school education failed to do, an education that she desperately wants in a society that dislikes to offer second chances.

The counselling function is one aspect of the colleges' sense of mission, their acceptance of wide-ranging responsibility, their recognition that students come from and return to a community with pervasive and permanent problems. The logical step, which the colleges have taken, has been to expand the functions implicit in their name and to become active participants in the local community. They have always been in contact with their communities because they are commuter schools and have to plan and organize courses to suit local needs. Their administrative structure has reflected these concerns; most colleges are run by a board on basically the same lines as secondary schools with a mixture of educators and residents of the community as members. The establishment of state boards has helped to even out financial distribution and to place all state residents, as far as possible, within easy commuting distance of a college. Most colleges are now developing even more participatory programmes, examples are: inviting local business men and industrialists to teach or supervise vocational courses, making the college an advisory and planning centre for the community and making study available for the elderly and handicapped.

Some colleges are even trying "outreach" techniques, often establishing mini-campuses on new sites. More innovatively this can also include "Television Community College", using the same approach as the Open University, and the establishment of actual outreach classes in local factories; a few colleges use both methods. Any college, because of the geographic remoteness, characteristic of their state, never

their own right, helping to establish a much clearer sense of shared purpose and professionalism; examples are *Community and Junior College Journal*, *Community College Frontiers*, *Community College Journalist*, *Community College Review*, *Community/Junior College Research Quarterly*, *New Directions for Community Colleges* and *Teaching English in the Two-Year College*.

These journals are particularly important in showing the injustice of university criticisms about "second best" academic status. There is no real doubt that the colleges continue to operate a very important academic function, especially for students intending to transfer. This means that they will continue to offer the entire range of options in higher education and that this will remain a difficult range to manage and organize. While the technical, vocational and professional education sections are likely to expand the fastest in the future the more traditionally academic sections should be able to maintain the opportunity for a balanced curriculum.

The success of the colleges in helping all types of student has led to accusations of "second best" from another direction. The problem inherent in the open door policy has consistently been that the community college might become the unintended safety valve for almost all social and educational pressures. Students often choose a community college because of its openness and because they feel hostile towards other institutions in higher education; however this can lead to them being absorbed into the supportive structure of the college and so denying them the chance to fulfill their total potential or to overcome their feelings about other possibilities.

They may never transfer and so never have any positive effect on the comparatively closed sections of higher education. In this way the colleges do become second best and the hierarchical structure of higher education remains rigid. This is partly reflected in the small proportion of students who actually transfer and partly in the sanction given to this by the colleges themselves which now give their own less prestigious qualifications and associate degrees. This is a particular disservice to minority and disadvantaged groups.

This kind of problem may be exacerbated during the 1980s for internal and external reasons. The original flood of financial support is now ebbing away. Internally community colleges are looking to sharpen their self-definition and to overcome finally the second best tag by being a little more selective; the open door shows signs of swinging closed as the colleges question whether they can really cope with every kind of student.

The external pressure will come from the prevailing budget-cutting, back to basics and "self-help" mood now dominating everywhere in the USA; making students pay for their education looks very cost-efficient and deters those students who most need extra study, so cutting down the need for basic and remedial courses, counselling, community involvement and potentially all the other features that made the community college a unique provider of educational opportunity.

A consensus has been reached that British higher education needs reform and restructuring. This has become imperative with the combination of social and technological changes in employment and the massive reorganization of secondary education in the 1960s and early 1970s. The tertiary sector is being expected to engage more and more in a much wider role in the same manner as the community colleges. Long-term social problems like unemployment, increased leisure time, racial integration and support for the old and handicapped are being added to already fundamental academic and vocational dilemmas about the 16 to 19 age group. If sixth form and/or tertiary colleges are seen as the answer they will need a genuine sense of "mission" to have a chance of real success. They will also have to make use of the experience of the British community movement whose very real achievements have so far been restricted to a base in the secondary sector with an increasing adult involvement.

"Let bygones be bygones". So Darlene ended her first piece of college work, emphasizing that her educational past was behind her and that now she looked forward to "a good start for myself". If the British tertiary sector cannot ignore its bygones it at least has a good supporting structure to build on. The community colleges could not be used simply as a model for Britain but their phenomenal expansion and success are an instructive contrast to British developments. They are set to dominate American higher education in the 1980s with a 40 per cent share.

It is particularly illuminating that Canada, a country with its educational roots in Britain, has recently started a community college system, the idea having already spread to half of the ten territories.

Certain features, especially their adaptability and range of functions, might well provide a working model for any British tertiary college; technical colleges, in their present form, have some of these features and might serve as a basis for expansion and development. The most salient point under present circumstances however is that they offer all students "a good start" in higher education, a chance to overcome past obstacles and to progress in social and academic terms to their individual "peak".

The author has just spent a year teaching at South Central Community College, New Haven.

At a recent three-day DES invitation conference for senior polytechnic engineering staff, it was resolved that the requirements of the engineering profession can best be served by the provision of two parallel degree course routes. The first of these would consist of courses of nine or 10 academic terms leading to a new award, either Bachelor of Science of Engineering (BSEng) or Bachelor of Arts of Engineering (BAEng). The second, lasting 11 or 12 academic terms, would lead to a Bachelor of Engineering (BEng) award and reflect the principles enunciated by the Finniston Report for that award. It is the proposed BAEng award which is particularly novel and is examined in this article.

What are the arguments which lead to the need for a new award, given that the four-year honours course leading to the BEng degree is also to be offered? To answer this question it is necessary to go back to both Finniston and the Report of the National Conference on Engineering Education and Training. It will be remembered that Finniston recommended that a new award, the Higher Education Diploma (HED), should stand alongside the BEng and that, more recently, the National Conference Report recommended BAEng awards should be only 9 or 10 academic terms but place even more emphasis on engineering practice and applications means that they must be radically different from current courses leading to BSc awards.

For many years, industrialists have urged that engineering education should prepare graduates to tackle the "real" problems of industry and society. The goals set by Finniston for the BEng are a shift in this direction, thus courses with an even greater emphasis on practice must have as a prime aim the education and training of individuals to solve problems in real situations, involving as they do many variables, much uncertainty and much accumulated wisdom. It is envisaged that this can best be done by concentration on a specific field of application or "mission".

The division of engineering into mechanical, electrical and civil engineering is too broad to allow more than theoretical treatment of problems in an engineering degree course. What is necessary for greater emphasis on practice is a new division of engineering knowledge into missions eg aerospace, agricultural, chemical, communication, computer, construction, control, etc. Some examples of courses of this type already exist - eg mining at North Staffordshire Polytechnic - and the general experience in these cases is that the emphasis on engineering practice is highly motivating to students. The motivation arises from the possibility in such courses of teaching from applications down to fundamentals and not just being restricted to teaching fundamentals and at a later stage applying them in pseudo-practical situations.

Objections of two kinds are voiced against courses aimed at such missions. Firstly, it is suggested that specialization to such an extent limits the mobility of the graduates - but this argument neglects the transferability of the skills acquired. Secondly, it is observed that school leavers already have difficulty choosing between branches of engineering - but this argument ignores the possibilities of deferred choice.

The goals of such courses must place emphasis on the acquisition of knowledge of the compromises and judgments required of engineers in practice. Furthermore, the goals must place emphasis on the acquisition of abilities in communications, problem-solving, decision-making and working with others in areas of practical engineering. It is this understanding and these abilities which will, if anything, make the graduates from such courses more mobile than those from current courses. In other words, the specificity of the application is necessary to the development of understanding and abilities, but does not limit their transferability.

The development of the required abilities - particularly those of problem-solving, decision-making and working with others - in a practical engineering context is almost certainly going to mean that these courses

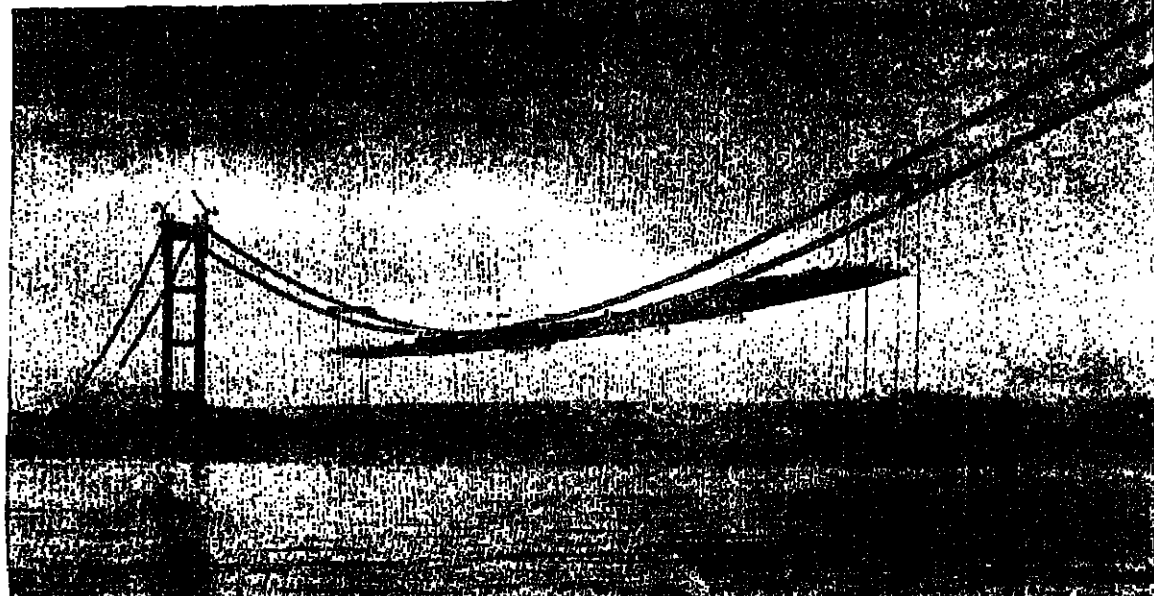
rest heavily on project work. As such, they are likely to be much more like courses in architecture and industrial design than current engineering courses and will require a major shift in teaching and assessment strategies.

It is important that school leavers offer the 18-year-old polytechnic an opportunity to experience engineering education before streaming to BEng or the more practice-oriented courses. Therefore, it is envisaged that many polytechnics will offer a common first year and that in any case a decision between missions need not be made before the second year. It is obvious that any given polytechnic would only offer courses in a restricted number of missions. Thus some transfer of students between institutions after the first year might be envisaged.

Courses which emphasize practice may suit students who are less attracted by theory, but they would have to demonstrate good practical aptitude. It is admitted to the second year. It is also likely that some of the most able theoretically would opt for the practical stream, seeing greater creative challenge in such courses. In view of the opportunity to demonstrate creativity and real engineering skill, the course must allow the award of honours to appropriate cases.

Obviously, such courses with the emphasis on practice have to be developed in close collaboration with the industries which they are to serve. It is also obvious that they will be developed most easily if they involve integrated industrial training introduced through the thin sandwich mode.

For far too long, engineering education has been seen as a offshoot of science education with an emphasis on collection and analysis of information. Abilities in communications, problem-solving, decision-making and working with others are equally demanding, and must be developed much more explicitly. The introduction of a new award, Bachelor of Arts of Engineering (BAEng), could well right the balance and be a fitting description for the courses which place a much greater emphasis on practice than current BSc courses.



The new Humber bridge under construction.

Bridging the engineering gap

John Warren argues the case for a new BAEng - one that must emphasize practical abilities.

asis on practice is a new division of engineering knowledge into missions eg aerospace, agricultural, chemical, communication, computer, construction, control, etc. Some examples of courses of this type already exist - eg mining at North Staffordshire Polytechnic - and the general experience in these cases is that the emphasis on engineering practice is highly motivating to students. The motivation arises from the possibility in such courses of teaching from applications down to fundamentals and not just being restricted to teaching fundamentals and at a later stage applying them in pseudo-practical situations.

Objections of two kinds are voiced against courses aimed at such missions. Firstly, it is suggested that specialization to such an extent limits the mobility of the graduates - but this argument neglects the transferability of the skills acquired. Secondly, it is observed that school leavers already have difficulty choosing between branches of engineering - but this argument ignores the possibilities of deferred choice.

The goals of such courses must place emphasis on the acquisition of knowledge of the compromises and judgments required of engineers in practice. Furthermore, the goals must place emphasis on the acquisition of abilities in communications, problem-solving, decision-making and working with others in areas of practical engineering. It is this understanding and these abilities which will, if anything, make the graduates from such courses more mobile than those from current courses. In other words, the specificity of the application is necessary to the development of understanding and abilities, but does not limit their transferability.

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BOOKS

The renewal of the Scottish connexion

James McCosh and the Scottish Intellectual Tradition
by J. David Hoeveler
Princeton University Press, £13.70
ISBN 0 691 04670 0

by T. D. Campbell

There seems little doubt that without the twenty-year presidency of the energetic and purposeful Scottish divine, James McCosh (1811-1894), the humble theologically-orientated Presbyterian College of New Jersey would not have emerged at the turn of the century as a leading American centre of higher education, Princeton University.

McCosh was more than a visionary and skilful academic politician, he was also a considerable intellectual figure of his time, deeply involved in philosophical and theological controversy, particularly over the significance of the theory of evolution for Christian belief. Although a conservative figure in the importance he attached to religion and morality in university education, he was an enthusiastic advocate of scientific research and in general open-minded towards new academic disciplines, such as physiological psychology. As an Evangelical Christian he encouraged religious revivals on the campus but as an ambitious academic administrator he fought long and hard with his board of trustees to bring about the development of a broad-based curriculum and the appointment of intellectually able teachers. Modern Princeton is the evidence of his success.

Professor Hoeveler, in this major biography, convincingly presents McCosh as an exemplar of the enormous impact of Scottish philosophy and educational practices on the intellectual culture of American society in the late nineteenth century. In the process of explaining the apparently conflicting facets of McCosh's ideas and influence Hoeveler takes us back through McCosh's tenure of the chair of philosophy at Queen's College, Belfast, to his experiences as a parish minister at Brechin; his education at the Universities of Edinburgh and Glasgow and his boyhood as a farmer's son in Ayrshire.

At each stage the author explores the social and cultural setting of McCosh's spiritual, intellectual and political development, the cumulative effect of which is a quite outstanding biography which succeeds in imparting a great deal of information in a manner which illuminates both the enigmatic character of McCosh and the nature of the impact of "the Scottish intellectual tradition" on the foundation of North American university education. In this task he has been assisted by McCosh's own autobiographical notes most of which were published in 1896 as edited by McCosh's colleague, W. M. Sloan.

The unifying theme of McCosh's life and of this biography, is his commitment to "the Scottish philosophy" as the metaphysical and moral foundation of Christian faith, sound education and practical wisdom. To-day his best known work is a perceptive if rather partisan contribution to the history of ideas, *The Scottish Philosophy from Hutcheson to Hamilton* (1875), in which he traces through over forty brief biographical sketches the development of the "common sense" philosophy which opposed both radical empiricism and pure idealism by vindicating the reality of the external world and the objectivity of moral principles.

McCosh applauded the realism in Hamilton's position but saw the theological danger of such a purely agnostic position concerning the attributes of God. If we can know nothing of the metaphysical realm what assurance can there be of its existence and what help can it provide in understanding the world and guiding our conduct? His own "invariant realism" follows Hamilton in asserting the veracity of "primitive cognitions", conceived on the model of Hutcheson's moral sense, but McCosh contends that it is possible, on the basis of the analysis of human cognition and feeling, to have a



The library of Princeton University in 1904. Without the twenty-year presidency of the Scottish divine, James McCosh, it is doubtful if the humble Presbyterian College of New Jersey would have emerged to become the famous Princeton University.

genius who reduce everything either to matter and sensation or to the status of purely mental or ideal phenomena. McCosh's own work is devoted to the thesis that observation of the material world and introspection of human mental and emotional operations are sufficient to establish the existence of matter, the reality of causal power, the bindingness of moral obligation and, by inference, the existence and attributes of God, thus setting the scene for the reception of divine revelation and the workings of grace in the human soul.

The youthful McCosh learned the elements of philosophy from James Mylne at Glasgow but his real intellectual progress took place at Edinburgh under the dual impact of the leading Evangelical churchman, Thomas Chalmers, and the outstanding philosophical personage William Hamilton, whose "Philosophy of the Unconditioned" provided the rallying point in Britain for opposition to John Stuart Mill's empiricism. In the religious divide of his day McCosh favoured the Calvinist message of sin, repentance and grace over the easy cultured moralism of the Moderate party. Chalmers's emphasis on the reality of the intense religious experience of the justified sinner greatly impressed McCosh. But the terms of the intellectual debate were set by Hamilton's attempted reconciliation of Kantian idealism with the common sense philosophy of Reid. Resting his case on the supreme philosophical authority of consciousness and its affirmation of our direct experience of the external world, Hamilton nevertheless restricts the range of human knowledge to "conditioned" entities, that is to those phenomena which are limited by being brought into relation with other things.

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reasoned belief in a First Cause which (or who) is adequate to explain the existence of the world and a moral reality that is correctly apprehended as requiring our obedience. Such a philosophical position suited McCosh's own brand of Christian faith by leaving room for revelation and grace, the former to supplement the metaphysical inferences of natural theology and the latter to enable men to reach the heights of moral excellence.

The practical reflection of McCosh's rejection of the genteel moralism of the Scottish Enlightenment and the indifference of the religious middle classes (including the Moderate clergy and associated academics) towards the conditions of the urban working class was his seventeen-year ministry in Arbroath and Brechin during which he participated in the dramatic events of the Disruption of 1843 as one of the several hundred ministers who followed Thomas Chalmers out of the established Kirk to found the Free Church of Scotland. This period of his life saw the emergence in the service of the new church of McCosh's formidable organizational and money-raising talents which were later deployed to such effect in the expansion of Princeton. Remarkably he also found the time to write *The Method of Divine Government* (1850) in which he set forth the evidence for the existence of God and presented philosophical arguments for the dualism of matter and mind using this to defend freedom of the will. It was the warm reception of this book that led to his appointment at Queen's College where he wrote his most technical philosophical works, *The Intuitions of the Human Mind* (1860) and *An Examination of Mr. J. S. Mill's Philosophy* (1866) in which he subjects Mill's sensationalism to as searing a critique as Mill's own onslaught on the principles of common sense in *An Examination of Sir William Hamilton's Philosophy*.

These works brought McCosh international recognition and following a speaking tour of the United States in 1866, during which he addressed a national gathering of Presbyterians at St. Louis and visited Princeton, he was offered the presidency of the College of New Jersey, then in the process of reuniting with its associated theological seminary. The finalization of the New Jersey, Presbyterian connexion of Princeton and

the impact on the College of American revivalism, were obviously attractive to McCosh. To Princeton he offered religious orthodoxy, academic prestige and a renewal of the Scottish connexion established by the presidency of John Witherspoon a hundred years earlier. But unbeknown to the trustees McCosh had academic ambitions to preside over a national institution, a design which, as Professor Hoeveler narrates, he pursued with determination against mounting opposition without wavering in his enthusiasm for his personal blend of evangelical religion, philosophical reasoning and scientific learning.

The objectives for which McCosh strove at Princeton included the introduction of a partially elective system covering a wide range of curricular choice including physics, chemistry, psychology, political science, history and modern languages, the encouragement of graduate study and original research in these areas, and the increase and geographical broadening of the student enrolment, all of which had to be supported by an extensive building programme, particularly of residential accommodation, and the endowment of scholarships and professorships. McCosh saw the college in personal and pastoral terms and sought to avoid the detachment of teachers from their young students which he had experienced at Glasgow. Much of his influence was due to his own somewhat absent-minded involvement with his students and the inspiration of his infectious intellectual enthusiasms in the classroom. Opposition came from the trustees and the more conservative professors who wished to retain the narrow orthodoxy of a minority religious sect.

McCosh eventually triumphed through developing financially profitable contacts with wealthy sponsors, building up the faculty with his own nominations (often his former students) and forging links with alumni associations which were at the time excluded from a direct say in college affairs. For brief periods McCosh felt himself to be fighting a losing battle with unruly students, declining in-takes and obscurantist staff, and the eventual victory of his policies came only in 1902 with the appointment as college president of his pupil Woodrow Wilson after an internal putsch ousted McCosh's conservative suc-

cessor. Thus McCosh, although he must be counted as one of the less radical of America's reforming academic politicians of the era, did succeed to a remarkable extent in giving institutional expression to his own blend of pastoral concern and intellectual progressiveness.

Hoeveler argues that the intransigence of Princeton's inbred faculty forced McCosh to ally himself with a cross-section of emergent pluralistic American society, thus inadvertently opening the way for a secular and outward looking national university of which McCosh himself would not have entirely approved. This is not unconvincing and has the format of an "invisible hand" explanation happily suited to McCosh's intellectual ancestry, but it does perhaps misrepresent the balance between McCosh's religious interests and his academic ambitions. Although much of McCosh's work is apologetic in motivation it is far removed from the dogmatic assertiveness of his predecessor in the ranks of clerical common sense philosophers, James Oswald. McCosh's religious objectives do not seem to have weakened the rigour of his scholarship. Somewhat naively, perhaps, he had no fear that intellectual inquiry could ultimately be hostile to religious faith, but where choices had to be made between the domain of science and that of religion he does not appear to have used the latter to exclude the former. This is well illustrated by his willingness to accommodate and defend evolutionary theory against biblical fundamentalists.

A true polymath, McCosh indulged in amateur botanical and biological studies. Under the influence of pre-Darwinian evolutionists such as Robert Chalmers, McCosh published a collaborative work, *Typical Forms and Special Ends in Creation* (1855), a morphological study which drew attention to organic patterns recurring in different species and might have gained more attention had it not been overtaken by the publication of *The Origin of Species*.

The fact that McCosh's intellectual positions were left behind in the steady secularization of modern philosophy should not encourage us to dismiss his intellectual endeavours as mere special pleading for Christian belief or to cast doubt on the reality of his interest and enthusiasm for new intellectual disciplines. Whether it was the egoism of the academic entrepreneur (in which he was not lacking) or disinterested commitment to an intellectual tradition to which he was temperamentally and patriotically fiercely attached, McCosh's pluralistic influence on Princeton may have been more direct and intended than Hoeveler implies. What was undoubtedly not to his democratic liking was the steady and unabated move towards social elitism which was intermingled with the college's academic development and to which he unwittingly contributed by the foundation of a feeder boarding school.

There are elements in this impressive biography of historical romanticism in the recounting of intriguing details of nineteenth-century Scottish life, and also of the sort of self-celebratory catalogue of distinguished professors and alumni usually associated with standard college histories. Moreover the author is accurate about rather than intellectually engaged with McCosh's philosophical ideas, doubtless as befits a historian of ideas. But the book as a whole is a superb conjunction of cultural, social and educational history centering on the life of a remarkable man whose characteristic Scottish mix of conceit, humanity and intellectual vigour has an interest of its own quite apart from its impact on Princeton College and the educational ideas and practices of the United States during an important period in its cultural development.

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Readjusting our overnight equations

Peter Copping suggests that the nature of British capitalism may thwart the kind of innovations in engineering and its practice envisaged by the Finniston Report

creates a highly turbulent environment, open to world-wide competition, and a demand for high profits to both satisfy investors' criteria, and provide the capital for industrial investment which is 80 per cent self-generated.

Finniston argues that companies are risk averse because of the stop-go policies of government, but in fact a more potent factor identified by the report is that companies which finance long-term investment from internal funds are vulnerable to the financial capitalist - to takeover from outside. In Japan, on the other hand, companies do not have to "keep one eye on the share price and the other on the creditors".

Management in this situation is not receptive to engineers proposing long-term, high-risk schemes. According to Finniston, management decisions are dominated by people lacking technical knowledge and having subjective biases.

In fact, the practices of management in this situation are based often on a model-by-model profit analysis. At a CIB meeting organized during Finniston's investigation, an engineer described this as "industry bumbling along on a hand-to-mouth basis, directed not by engineers but motivated by short-term profit considerations, preferring the aggressive selling of an inferior product rather than improving the quality of performance".

What Finniston fails to understand is that it is not incompetence or attitudes that bring about these practices. They are part and parcel of organization policy required for success in the Model version of the capitalist economy. Power in the capitalist economy flows to those who have the skills needed to respond to the pressures the organization finds in

the market places where it operates - and under Model I conditions it is accountants who count.

The alternative management model not only has to have the opposite characteristics of the "short-term/high profit" model but has to provide the conditions considered necessary for engineering innovation. Innovation has to be organized and by specialists - as Finniston suggests, a cadre of staff allowed wide access to the organization (and not shut away in an R&D department), often under the lead of a charismatic individual and following a positive spiral of innovative activity. The cadre needs to be protected against threats of job insecurity by a continuing commitment to R&D expenditure. The Finniston proposals provide the knowledge and new training for engineers which are required for them to manage in this way.

But for most part, the long term horizon which in Finniston's view is required involves a quite different model of economic organization and industrial management - once dominated by the new élite of engineering trained by the educational programmes Finniston proposes. Model II capitalism. The long term horizons require both a source of long-term finance and some method of risk reduction. In the Finniston version this is coordinated by the state. "The Government should channel public funds, building schemes into a coherent strategy based on a common understanding of the engineering dimension."

State is both a source of capital and risk reduction through "cooperation" rather than competition. Studies of Japanese industry - and particularly the Japanese motor cycle industry - are the source for the classic version

of this strategy.

In the early stages, investment is not made for direct profit but to secure market share and with an eye to improving the cost structure (that is, overall productivity not just labour productivity). In the production function, this means low-cost/high-volume plants using the best production engineering applicable and, at least in the early stages, a control of product variety. The productivity gains come from the virtuous spiral of innovation from the cadre of engineers which we have mentioned earlier. This can be measured by a sort of generalized learning curve which has become known as the "experience curve". Here, as the market is exploited and production unit costs decline faster than the competition and market share grow, but without the apparent slowdown predicted by economists of economy of scale.

The success pursuit of this strategy requires investors who are willing to take risks and have a long-term view, since Model II organizations are capital-hungry and will not in the short run be able to generate investment finance internally. It also requires effective institutions to channel investment into the appropriate sectors through the banking system and, of course, the protection of the enterprise from unwanted attention from other organizations or financial capitalists. Above all, it requires investors who only seek relatively low rates of return and are therefore motivated by needs other than profit-maximization.

Market development in Model II requires the limitation of production competition and the direction of mechanisms like the "utilization of

the market by the dominance of state purchasing or by the "administrative guidance" of Japan's Ministry of International Trade and Industry.

Finally, supporting the financial and government structure is a "shared value of national interest" (GHI Ltd). This is reflected again in Finniston's search for national consensus on the engineering dimension. This can be harnessed and developed both internally to reduce import penetration ("Buy British") and externally to justify policies which are not immediately rewarding to individuals or organizations in the export market.

The Model II policies are, of course, not applied throughout the Model II economy. Indeed, part of the skill of the coordinator of investment policy is making discretionary investment decisions. The best fit is that flow from these policies are also limited to some groups.

It is doubtful if in the short-term consensus such as Finniston requires could be generated for Model II proposals, since they require many radical changes, and it is even more doubtful that these could be brought about through the proposed engineering authority mostly dominated by those most concerned. Indeed, the policies Finniston is advocating seem more akin to those advocated by the group surrounding Tony Benn. But what is needed is to refocus the debate from Finniston's proposed institutions and educational programme to the economic pressures for the "engineering dimension".

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BOOKS

Poems as propaganda

The Transforming Image: a study of Shelley's major poetry
by Jean Hall
University of Illinois Press, £7.77
ISBN 0 252 00766 2

Destroyer and Preserver: Shelley's poetic scepticism
by Lloyd Abbey
University of Nebraska Press, £8.70
ISBN 0 8032 1001 9

Shelley's Poetic Thoughts
by Richard Cronin
Macmillan, £15.00
ISBN 0 333 30009 2

Setting aside the sizable element of "Don't Knows", we may reasonably venture the supposition that half the remainder of humanity consists of materialists who feel in their bones that what is just is, the other half consisting of mystics who feel in their solar plexus that what is really isn't. In general, romanticism began intuitively to the second group, but intellectually to the first—thus sustaining a conflict that produces the typically tormented confusion of their worst poetry and the felt complexity of their best.

Shelley, though, has been held to be somewhat different, in being much more of a materialist to begin with, under the influence of Godwin, and much more of a mystic later, under the influence of Plato. The effect of recent work, however, has been to assimilate him to the general pattern. Not that this is the stated intention of the three works above—that it is their effect may be the fact that all these authors, though not purveying a straightforward structuralist case, are touched by the current fashion for structuralism.

What they intend is to show Shelley as a profound and consistent philosophical sceptic writing profound, consistent philosophical poetry. Happily—for such is not the case—all three in effect improve on that intention. Cumulatively they modify the distinction between a Godwinian and Platonic Shelley, and they do show that he started sceptical and became more so as he developed. But his is rather a special sort of "scepticism". It is not wholly scepticism in the popular sense of doubt about the claims of religion or assertions of the supernatural, nor is it wholly the philosophical scepticism about the existence of an objective world or of other people that leads to nihilism (or structuralism). Rather, like other English romantics, Shelley disbelieved in religion but wished he could believe in the supernatural—and sometimes did, or said he did. Sometimes he believed the external world was a creation of the mind, but at other times opposed its sole reality to the falsity of those claiming a higher reality and an after-life. In short, he was sceptical in the sense that he could not make up his mind, or make his mind up with his feelings, though the present studies do concur in indicating that at the very end he did come reluctantly to accept that there was no after-life in any real sense of the word. What they don't quite manage to prove is that what has looked like confused poetry must now be taken rather as the formal expression of scepticism.

The reason for Shelley's predicament seems evident: he was radically opposed to his society—and if one is engaged in a struggle with a power there is a natural desire to be allied with some bigger one. But the Church had begged God, and the State had begged God, Church, so what was left? Well, "Nature", "the One", "the World Spirit", or the "Absolute". To his credit, Shelley was more (though not always consciously) aware of such concepts than most of the romantics.

On the whole, Jean Hall convincingly demonstrates that Shelley combined empiricism with Platonism throughout his career. The atmospheric influences of structuralism and

post-modernism, however, lead her to overlook the opportunities for vacillation or confusion in such a combination. Thus she writes:

Epipsychidion demonstrates that to sing is to be: the poem shows a self being formulated, shows how existence can become a function of expression (page 124).

... the maker of the poem discovers that he has been indirectly transformed by his own poetic activity (page 105).

Statements whose truth is at best partial. Half-truths whose value is at least questionable (does it make the poem any better, for readers, if it proved therapeutic for Shelley?). Shelley's later poetry—oddly but probably correctly—is seen to become anti-transcendental through a mystical metaphysics: "it deals in experience, not objective truth" (page 40).

The tenor of this book, in fact, is that all Shelley's work is really a reflection of his own constantly changing experience, an idea that certainly carries some conviction—and one that brings Shelley's longer poems into line with Blake's literary dinosaurs, which also purport to be philosophical but appear to be really basically psychological. They are the poet's means of coming to know an unstable self, a self in conflict. The danger in such an idea is that it may lead, in the structuralist way, to the assumption that this is enough. When you've seen what something is a sign of you stop. Or worse, you implicitly assume that what might, by certain standards, be taken as faults are not so, because they are valid signs of faultiness, outside the poem but revealed by it—a proper stopping-place for the sociologist but a dereliction of duty for the literary critic. Professor Hall's lucid and thoughtful book does not escape this charge. For example:

... the failure generally has been charged to Shelley's account. Actually ... Shelley, through his singer, is enacting a certain kind of poetic failure (page 106).

Nor do Professor Abbey's and Mr Cronin's similarly clear and thoughtful books escape it either—though Mr Cronin's comes nearest to doing so (as one might expect of a book specifically disclaiming the typical concern of Shelley—as of Blake—critiques with "a deep structure of which the individual poem is only one transformation"). "If speech created thought," writes Professor Abbey, then, in a real sense, we create the world through speaking it" (page 3).

This is fashionable in Shelley's time as it is fashionable again now—wordy sound, but not sound enough to support the superstructures logically laid on it. Professor Abbey cites the case of God to support his assumptions ("God said let there be light, and there was light"), but God is a special case. He does show that Shelley mostly shared this misconception, and is therefore convincing when he argues that Shelley is often engaged in a struggle against the conservative force of language. For whatever structuralists or phenomenologists may allege, language is normally used to communicate a fairly sharable experience of a largely shared world. He also rightly demands of Shelley's massive demands on his reader's interpretative energy, "demands with which no reader can fully comply", but doesn't consider whether this might be a shortcoming. "An area of indeterminacy in its meaning" (page 25) may indeed mean that the poem is not unduly limited or obscured—or, more pejoratively, that it is vague. Again:

To attempt to identify which reflection is true is to run counter to Shelley's manner. The purpose of the ironical shifting of tones is to preserve his social detachment from the problem he is exploring (page 37).

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Or, might one say, Shelley's inability to solve his problem creates a confused and confusing poem? At any rate, the question of the value of merely expressive poetry deserves some consideration. Certainly, to claim the inadequacy of its images as "analogues of noumenal reality" (page 4) as the source of the peculiar strength of Shelley's poetry has some critical questions. Similarly, obscurity in the poetry is justified on the grounds that it dramatizes "the ineffability" or is "characteristic of Shelley's apocalyptic skepticism". Professor Abbey concludes that Shelley's longer poems are all objectifications of his own mind, that their "constant redefinition reflects his own sceptical qualifications of each intellectual position he embraces" (page 47), and that he finally became sceptical enough to recognize the futility of transcendental speculation.

The truth is that Shelley wanted his poems to be propagandist but not didactic. Like advertisement, they were to create a persuasive brand-image, by arousing "beautiful idealizations" while avoiding a reasoned system (preface to *Præterea Unbound*) for his political or moral panaceas. A task, one might think, inviting vague metaphysics, especially if the material is being sought in the poet's own being and inner experience. How does the mind scrutinize itself and come to valid idealizations without reference to an objective world? It may not be impossible, but it is certainly not easy, since it is rather as if an examiner were setting his own papers and marking himself. How does he avoid some kind of cheating? Shelley needed to be sceptical! The other side to this coin, of course, is that the poet may escape being limited to a morality and idea of human nature that are simply typical of his own day. In short, we would expect a poetry of peaks and troughs, and proven scepticism is no good reason to alter that expectation. A poem that seems to end on a poem exposing sentimentality by proving the poem a sceptic.

Mr Cronin, even more than Professors Hall and Abbey keep close to the poems themselves and is sensitive to their actual characteristics. It's the evaluation of them, in his case as in theirs, that is questionable. Thus he rightly sees that *Præterea Unbound* is a conventional and undramatic play, but excuses those features "because the central dramatic activity that the play represents is the evolving shape of the play itself" (page 134). However, modernism at its most innovative, similarly, he takes Shelley always to be conscious of the conflict and contradictions in his work—something difficult to establish, in any case irrelevant to the questions of whether they are well expressed or well worth expressing.

In any case, the quality of Shelley's scepticism is not above suspicion:

[man] is everything that can be perceived of it. Nothing can be in his thoughts, and everything in his thoughts exists. Therefore the dead exist, and supernaturally, but because they are objects of human thought, and so exist with neither more nor less certainty than the sun and the moon (page 162).

If Shelley, Mr Cronin, and the structuralists believe this to be a whole truth, they are, in my opinion, not half sceptical enough. At any rate, no practical prevalence of such scepticism is the prevalence of such scepticism in the long poems or the lyrics. It is the philosopher or psychologist, it is the lyricist that really matter as they split the current critical trends, and not the poet.

Allan Rodway

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BOOKS

Is it good for General Motors?

The Multinational Motor Industry
by George Maxcy
Croom Helm, £14.95
ISBN 0 7099 0312 X

The motor industry exhibits a high degree of industrial concentration, coupled with extensive multinational operations. In 1979 six of the eight largest motor manufacturers were multinational and together accounted for over 60 per cent of world motor vehicle production. The motor industry is therefore admirably suited for testing recent theories which explain the multinational enterprise from the standpoint of industrial organization.

It is well known that the industry enjoys huge economies of scale at the plant level. It has been suggested that the minimum efficient scale for the machining and assembly of engines and transmissions is half a million units per year, and for the pressing of body work about two million units per year. Since these figures refer to a single product line it is apparent that the minimum efficient scale is large relative to the size of the market. Transport costs for components such as engines, transmissions and body panels are relatively low, so that in the absence of other barriers to trade, production of each component would tend to be concentrated in a few locations (indeed, often just a single location). Assembled vehicles are more costly to transport than a kit of components, and since the minimum efficient scale of assembly is lower, there would be a tendency to have more assembly plants, located near to each of the major centres of demand.

However, as the author shows, the international division of labour in the motor industry has been severely inhibited by government intervention. Most governments have sought to stimulate employment by attracting labour-intensive assembly operations through the imposition of higher import duties on assembled vehicles than on imported kits and components. For military and other strategic reasons some governments have also protected small-scale producers of engines and transmissions. This is particularly true of developing countries, where import-substituting investment

induced by high tariffs is quite common. In Europe and North America the creation of free trade areas has led to a move away from import-substituting investment toward export-oriented investment based on the rationalization of production (though the need to insure against disruption means that there is some dual-sourcing of assembly plants).

Maxcy makes the interesting point that because of the importance of tariffs to motor manufacturers, even the largest multinational firms still need their home governments to exercise political influence on their behalf. He suggests that Ford and General Motors continue to locate in the US not only to reduce transport costs to the home market but also to retain the goodwill of the US states in themselves—or as sovereign states in themselves—may have to be revised. In the motor industry at least it appears that the largest producers need a political arm, and so maintain a national identity in order to enlist government support.

Because of the external tariffs associated with free trade areas, the motive for import-substituting investment by those outside the area remains. Maxcy suggests that the threat of higher external tariffs is the main factor encouraging the Japanese to produce in Europe and North America, despite the fact that they lose some of the advantages of economies of scale and access to Japanese labour.

The motor industry involves substantial intermediate product trade. Maxcy suggests that about 60 per cent of the cost of a car is accounted for by purchases of components. If it were not for these arm's-length transactions in components, the leading producers would be even larger and their degree of multinationality would probably be greater too. Despite its obvious importance, the author does not inquire why the motor industry internalises the production of some components but not others.

A possible explanation for this is that the components that are produced internally are those that depend on proprietary know-how,

which is of two main kinds. First, there is the marketing expertise embodied in the design and specification of the model. A motor vehicle is an individual product, having a combination of characteristics: performance, carrying capacity, safety, reliability, and so on. Marketing expertise is required to spot a gap in the market and to design a model which offers the prospect of volume sales. Secondly, technical expertise is required to engineer the model to embody much more design and engineering know-how than will others.

Although the author is aware of the relevant theoretical literature, he does not consistently apply it in the manner suggested above. His theoretical introduction surveys a number of different approaches, but there is no attempt to synthesize them, nor to critically examine the differences between them. Much of the analysis is very repetitive; indeed one passage on page 40 appears again verbatim on page 56. The main section of the book gives a chronological history of multinationalism in the motor industry from their first appearance in 1902 down to the present, subdividing the discussion in each chapter along geographical lines. The author has assembled some quite fascinating material, albeit mainly from secondary sources, and presents it very clearly. The rest of the book consists mainly of independent subject studies concerned with, among other things, technology, labour, tariffs and government-MNE relations.

There is no doubt that the book is a valuable contribution to the literature on multinational firms. But it is equally evident that there remains a great deal more work—both analytical and empirical—that has to be done on the motor industry before the role of multinational firms is fully understood. Indeed the work of testing theories of the multinational enterprise in the context of the motor industry has barely begun.

Mark Casson

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Debating the power of the unions

Theories of Trade Unionism: a sociology of industrial relations
by Michael Poole
Routledge & Kegan Paul, £12.50
ISBN 0 7100 0695 0

Michael Poole's survey of theories of trade unionism is much more ambitious than a mere bibliographic review, for he wishes to synthesize the main schools of thought into a new framework. We are offered, as a result, not only a historical panorama of theories of trade union behaviour but a kind of conceptual Esperanto.

Dr Poole has condensed an impressive range of scholarly output—indeed at times it is like reading a particularly thorough filing system. He begins with a five-fold division of early theories, which conceived of unions as basically inspired by ethical, revolutionary, defensive, economic or political considerations, and reviews the systems approach, originating with Dunlop, with its focus on industrial relations. The Oxford school—whose principal features are described as a concern with job regulation, a commitment to the voluntary reform of industrial relations, and an association with trade unionism in its various forms—is traced back to Durkheim, and the differences between the approaches of Clegg, Plummer and Fox carefully described. All this is highly competent.

Weberian and Marxist contributions to the debate, are then reviewed and this leads into his major task of demonstrating "that

the concept of power may be deployed to integrate disparate departures which otherwise would appear to be based on irreconcilable maxims and premises". This is indeed an ambitious goal, and for all his thoroughness Poole cannot be said to have attained it.

His desire to give a fair hearing to all the participants in the debate prevents Poole from refining his own conception of power. Although he refers in the very first paragraph to the power of union officers and lay representatives as "an issue of paramount concern" we are neither given a clear view of how Poole considers that power is actually exercised, nor of how effective it is.

Later chapters discuss union growth and density, and (to a lesser extent) union militancy, but the often contradictory facets of trade union behaviour are not satisfactorily analysed. How far, for example, are stewards in the newer white-collar unions able to draw ideologically on the historical traditions of the labour movement? What type of interests do union leaders appeal to—individual or collective? If the latter, how great is the appeal? And he does not confront the issue of how the actions of trade unionists are to be explained in relation to group, class or broad societal interests. Indeed, the book hardly deals at all with the specific behaviour of trade unions—references to individual organizations amount to a single mention of the Amalgamated Engineering Union. Indeed it is a work of review and methodology; yet some descriptive ballast is essential to tie

the exposition to concrete details of the way in which unions actually make and act on decisions at various levels.

Communication and debate between the different schools of thought is certainly possible, and it is valuable to emphasize their common elements, but the focus on "cultural elements" and the social action perspective is not enough in itself to blend approaches which represent fundamentally opposed views on, for example, the class-bound nature of industrial society. As Poole has brought together the different elements in the debate, but has not succeeded in binding them into a common framework.

The book's value lies in its condensed and their contents painstakingly itemised. Yet to be palatable such a task demands a light touch as well as a sure understanding. Poole resolutely avoids ordinary words: concepts are always "deployed", never used; things are "salient", never important; literature is even "posterior" rather than later. The over-abundant footnotes are set out in an infuriating way that compels double reference to the back of the book. It would be a pity if these flaws detracted from the immense effort which has evidently been invested in the book.

Tom Schuller

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Captains of industry

The British Business Elite: its attitudes to class, status and power
by John Fidler
Routledge & Kegan Paul, £15.95
ISBN 0 7100 0770 1

There is no doubt that it is important to study the power structure of British capitalism. Fidler's book is an extremely thorough attempt to examine the attitudes of the "business elite" in the mid-1970s.

Fidler remarks that in a period when economic problems of British capitalism dominated debate, "it seems to be accepted that all social and political reform should come to a standstill. This, in turn, leaves elite groupings free from threat and out of public scrutiny". He argues that there has been too much theoretical debate and very little empirical research on the structure of society. As a result there are many interesting and useful points, in the book, but the basic question which arises from the research is how empirical studies of attitudes can contribute to the public scrutiny that Fidler quite rightly advocates.

The research is largely based on 130 interviews with chairmen, managing directors, and other directors of leading financial companies in the industrial and financial sectors. The study of attitudes and beliefs is based on the premise that "businessmen" (as Fidler points out there were no women in the research) "have power and influence in certain domains of social life, even if this extends no further than their own companies". He excludes nationalized industry directors because, "such men are simply not as free to make decisions". This omission is regrettable because, as Fidler subsequently adds, "the focus of this enquiry was primarily with class, status and power at the societal level rather than within the firm".

Despite this confusion, the main problem I found was that Fidler had no declared theoretical position. The extensive review of all the relevant literature on attitudes, values, "meaning systems" and ideology ranges from the ownership/control debate based on the work of Berle and Means (where managerial attitudes to profits and growth are held to be very important), to the views of Althusserian Marxists (who consider attitudes and meaning systems to be irrelevant to the study of capitalist structures). Fidler successfully explodes the assumptions of Berle and Means by finding that, "profit remains the aim and measure of success". But it is not necessary to be an Althusserian to see problems with the empirical approach which sets

out to test a range of hypotheses on attitudes without a theoretical focus. Frequent references to "capitalism" are not enough when no attempt is made to define what is meant and when it is not possible to infer what is meant from the hypotheses and the evidence.

A particular illustration of this is Fidler's attempt to discover what businessmen felt about the power of the City and financial institutions. He writes that, "among merchant bankers... an ethic of the banker as a professional provider of a service can be discerned... which is somewhat at odds with the concept of the banker as the ultimate controller of industry".

Attitudes and values are important, for some of the reasons that Fidler mentions. But they can only be a part of broader studies of what happens in practice, guided by a theoretical framework. It is impossible to study the power of the financial sector by asking about "meaning systems" alone. So far as the financial institutions are concerned, what Fidler has discovered is their ideology, something which he maintains he is not doing. But it is only by considering other evidence within a theoretical framework of capitalism that makes it possible to say this. When we consider, for example, the activities of stockbrokers Rowe and Pitman in the secret build-up of shares in, and subsequent "dawn raid" on Consolidated Gold Fields, along with the Department of Trade inquiry into the offshore and overseas activities of nominees of stockbrokers Lawrence, Prust and merchant bankers Guinness Mahon in the build-up of shareholdings in Dunlop, then the role of the financial institutions can be seen to be far more complex. It is not easily summed up by the simple concept of "control" or by attitudes of "professionalism".

As Fidler himself points out, conclusions about beliefs and ideas, "have to be taken in conjunction with other evidence of all types". Fidler should have done a quarter of the book, concentrating on literature and evidence predominantly about attitudes, values and "meaning systems" which fail to provide the analytical structure required. It is only by adopting a broader view in our research that we can provide proper public scrutiny of elites and power structures in Britain.

Richard Minns

Richard Minns is author of "Pension Funds and British Capitalism" (1980).

THE ARMENIANS: A People in Exile
David Marshall Lang

For some two thousand years, the Armenians have been partly a people in exile; today there are some six and a half million scattered throughout the world. David Lang, author of *ARMENIA: Cradle of Civilization* follows their trail, gives a graphic account of the persecution of the Armenians by the Turks and describes their early history. His new book includes such varied topics as the Armenians' contributions to art, architecture, music, cooking, business, literature and other aspects of international life and culture.



George Allen & Unwin

£12.95

PO Box 18, Park Lane
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Don's diary

Sunday

Croissants from the Lebanese *El Sultan*. Coffee with Nido powdered milk. No Thadion steward to help with the washing up this morning. We "horn" our way to Maiduguri market, past the Shehu's palace and park. Toothless, wrinkled Kanuri ladies with gold rings in their noses sell groundnuts and guard our car. We wander, wondering, among the spices. Moneychangers shuffle CFA Francs as Cameroonians buy Naira, Nigeria's currency. Fulani girls with calabashes of butter, Hausa traders hawk dresses made in Paris, transistors from Tokyo. A traditional doctor displays a hyena skin, vultures' beaks and tiny, dead hedgehogs.

We buy pots for plants to live up our courtyard. A man, incongruous in spivvy Western clothes, tries to pick my breast pocket. With hands full of pots I paunch him out of the way and he scuttles off. If I had yelled *barawa!* he would have been beaten, maybe killed. Swimming in the afternoon, William aged six, dives for kobo coins and swallows one. Parental consternation.

Monday

Up at 6.00 and tune to BBC World Service. Unleash my way through the house, relieved to have had another burglar-free night. No need to look at the weather. It is sunny and already hot as usual. A cup of tea and I am collected by a college car. I lecture daily at 7.00 to remedial students who supposedly are trying to qualify for our pre-degree course. Many do not seem to care. Perpetual students, cushioned against reality by scholarship money earned down south by pumping oil and distributed among the 19 states.

Mid-morning at the hospital, the X-ray shows the kobo making good progress and a diet of semovita, cabbage and mango is recommended. After a noon lecture I go to my Hausa class. Five experts and Mallam Balami learning by rote "*Barka da warhaka*" - Greetings at this time of the day.

Two bottles of iced water precede lunch and a siesta. We garden in the early evening heat. Back to college for a late night lecture to the final year students, keen and serious as exams approach. On the way home I buy a peppered chicken, grilled over a wood fire by the roadside. Delicious.

Tuesday

Usual lectures and a bit of gentle marking but the bulk of my time chasing up the replacement of my air-conditioner. Vital in this heat. Attempt a siesta in the afternoon but the temperature is 105°F so there is not much profit in that. Later, I umpire polo and chat with the Nigerian players about the clubhouse we intend to build. At night I lecture again while Carolyn makes pasta and dries it around the house to dry.

Wednesday

Letters from home brighten up a day of marking and administration. The storekeeper refuses to process my requisition of this and pieces for my office simply because it is "too long". Later, William rejoices because he can now change his diet. Alice is coming out in prickly heat so we celebrate the delivery of the kobo by cooling down, courtesy of Laing International who have a swimming pool nearby. At home the *Matigadi* (nightwatch) catches a four foot West African House Snake. The kids hold it and have their photo taken before we release it in the garden. Keeps down vermin and is to be encouraged says our little book. I hope it is right.

Bill Knight

The author is principal lecturer and head of history at Borno College of Basic Studies, Nigeria.

Thursday

A day of arrivals, time to revise as exams loom into sight. Better still, a new air conditioner to be installed. And, even better, in the evening Gwennifan and John from Lagos, by Land Rover. He, an engineer on holiday. She, very Welsh, working for the Lagos Museum. Good friends for years. An evening of Star beer and reminiscence.

Friday

Up at dawn and park the children with friends. Land Rover south down bumpy roads to Damboa. Gwenn is a bend-freak, engaged in classifying the Lagos collection; this journey an exploratory survey of boards in Eastern Borno. At Damboa and later at Askira we are met with great courtesy and shown available samples. At Chibok, Gwenn buys stone beads in a tiny market. At Askira the district head shows us a letter from Lugard, dated 1914, thanking the people of Askira for their donation of £500 towards the war effort. At Lassa, name place of the feared fever, John collapses in the heat and we revive him with salt and Mongocola, a sickly green drink bought from a road-side trader. A kind man brings slightly muddy well-water to pour over his head. At Lassa there is a society wedding, bride in white veil, bridesmaids in green. The officiating pastor is the Rev. Mallam Balami. "*Barka da aiki*" - Greetings at your work.

Greetings at your coming. Heading north along the Cameroon border there is rain on the Mandara Mountains, the first rain on mountains I have seen since leaving Caernarfon last October. Now along fast tarred roads through Gwoza and back home. A round trip of 600km.

Now everything is different. Earlier retirement has become one of the need for redundancies and just to diminished resources and falling enrolments. Inevitably, as in the case of the colleges of education staff in the 1970s, attention is being concentrated on the financial terms.

The money is obviously important. The existing Premature Retirement Compensation Scheme for universities (PRCS), may turn out to be

Saturday

Dawn again and Gwenn and I set off again, leaving the others to swim. This time north-east to Dikwa, a nineteenth century capital of Borno, where Rabeh's palace still stands. Breakfast on bean cakes, bought in the motor park, peppery and deep fried. We drive past the palace, leave the road and take to the bush, moving across the flat *firki* plain, from village to isolated village, examining the beads of the Shuwa Arabs. Most of their beads are the same, small, white and possibly of Asian origin. Others are locally made, glass, from Abuja, near the Niger-Benue confluence. Here and there we see old trade beads from Venice and coral beads which, we are assured by the devout, come from Mecca.

At Shilla where wind and rain have exposed acres of pot sherds, the debris of past ages, we go on foot in search of beads and sure enough, there are those tiny white beads again.

Forced by the intense midday heat to abandon our search we drive back across the flat plains that once used to be the bottom of Lake Chad. Curious as to why a group of people are digging with hoes, seemingly at random, in the baked cracked, black, grassless clay, we drive over to inquire. Incredulous, we watch as they unearth fish from beneath the bone-dry surface. They are lung-fish, 18 inches long, fat, fresh and alive, waiting for the rains and floods that would set them free after a nine month dry imprisonment.

Flabbergasted, exhausted and very, very burnt we return to Dikwa, to call in at an Italian road-construction camp and drink beer.

Retirement is a problem for us all



William Taylor

even less attractive than redundancy if the latter yields large payments for loss of tenure. It is certainly less generous than the so-called "Crombie" Code that applied to the colleges of education. It is particularly unattractive for that substantial proportion of university staff, especially those in professional subjects, who embarked late on an academic career and have inadequate pension carry-over from earlier employment.

The 55-year-old with 30 years reckonable contributions may find the maximum ten years of added service of interest. Someone in the same age group who took a first academic post in his or her late 30s - a by no means uncommon occurrence - is unlikely to take a second look. In any case, many universities have so far limited their offers to less than the maximum ten year addition.

Buying in the necessary years is expensive. With no reserves, no firm agreement as to the size of the sum that the UGC would need to sustain large-scale application of the existing scheme, no decisions yet concerning the distribution of the limited amount already earmarked for this purpose, and the fear of having to pay out large sums in the case of contested redundancies, treasurers and finance officers have been understandably cautious.

On the face of it, no academic who has remained productive, who can still be moved or excited by books and talk and ideas, who still considers he or she has something

World of the intellectual moonlighters

intellectual and, one hopes, emotional and moral growth which will make him a bigger and fuller person.

This is not just a matter of self-seeking pursuit of one's own advantage. It has a social dimension too. The man or woman who has thus developed his own capacities and his awareness of them will usually be a better citizen. If he has a difficult and demanding job he will show greater understanding of its problems and their causes. If he has an undemanding job, he will be less likely to become bored, dissatisfied and careless; partly because he may find that there is more in his job than meets the eye, partly because he will have other outlets for unused energy and ability. If he has no job at all - and there will be many such in the near future - he is less likely to succumb to numbing despair or mindless violence.

Surely this is not a domain for a narrow scrutiny of cost-effectiveness and vague talk about payment of full cost price by employer or employee. It should be thought of rather as a kind of social service to be given maximum accessibility, as secondary education and medical treatment have become during the lifetime of the older among us. An educated, alert, critical and confident society is better able to face the changes and challenges of the period in which we live than one that is ignorant, dulled,

worthwhile to say should fear retirement. For some, of course, the transition may be easier than others. The scientist and technologist may find it hard to keep a place in the lab or as investment in a project, although many do manage to do so.

For those who from an early age have learned to base themselves (not just visit or use) libraries, who regard work in such places as the centre of their lives, in relation to which teaching is a product and administration a necessary distraction, there need be no cause for despair.

Even so, those brave enough to eschew the unqualified expression of pleasure and satisfaction that retirement etiquette demands, often admit that status can be a problem. Egos bolstered by rank, seniority, secretarial assistance and control over resources are easily bruised when these props are removed.

There is no necessity about any of this. Leaving aside the merit of otherwise of current policies for higher education, and the views of those who query why academics should be protected from conditions that are the lot of so many others in the population (a more common view than some of us like to recognize), much could and should be done to minimize the effects of the cutbacks on individuals. Improving the terms of current early retirement schemes must obviously have priority. Beyond this, other things could be done at more modest cost.

Part-time and sessional teaching opportunities should be offered to early retirees who wish to keep footfold in classroom or laboratory. Institutions might finance reduced bursaries to facilitate research or the completion of projects. Space created as a result of falling rolls and staff reductions could be offered to the use of the retired, together with modest amounts of secretarial, telephonic and computer back-up.

Library, common room and other memberships should be offered at a right, and former staff actively encouraged to make use of them. For some, none of this will be necessary. For others, it could mean the difference between considering or accepting retirement terms.

No doubt many institutions already have these matters in hand, and could add considerably to its modest list of desirable actions. If so, they should not keep quiet about it. Acting now need not imply concurrence with policies that have suddenly given prominence to the issue of retirement. Sooner or later, it is a problem, or blessing, for us all.

confused and despondent. All that can be said in favour of continuing education from 16 to 18 can be said with even greater force of continuing education after 18. The more interest and confidence a person has, the less likely is he to need other and more costly social services.

Apart from such calculations, it is surely the mark of a civilized society that it offers its members maximum access to the pursuit of knowledge, just as it does to the practice of music, sport and the like. This is the philosophy which underlies the development of our splendid public libraries, our adult education centres, and most recently of the Open University. It is a philosophy which should be needed all the more in the years ahead. Let us not seek to make short-term economies that will create long-term problems. And let us avoid pricing continuing education out of the market through misleading analogies between part-time and full-time fees.

I am convinced that there will be a growing demand for part-time degree studies. Whether higher education for mature students should be organized to follow patterns designed for school-leavers is a question to which we must give serious thought. It is whether "part-time" study is necessarily meant evening study is a question to be considered. So, in all abilities are limitless. So, in all abilities, is the demand. What is needed is the political will to meet them together.

Robert Brown

The author is retiring as head of the department of classics and is now history at Birkbeck College.

LETTERS TO THE EDITOR

Reorganization of London University

Sir, - Peter David's perceptive analysis of the problems of London University (*THES*, July 24) omits two important factors. The first is that the University of London court has for long merely rubber-stamped the recommendations of its officers - as any member of the court will privately admit. Discussion of the grant distribution has reportedly been discouraged so as to avoid friction between colleges.

The first Swinerton-Dyer report published by University of London unit costs for the first time, in spite of strong opposition from within the Senate House. The figures show that there has been no rational basis for distribution of the university's grant in the past. Indeed, the smaller colleges, always assumed to be more expensive and in need of the protection of the federal university, have generally not been well funded. In many eyes, including those of some court members, the court is now discredited and this may well be a factor in tipping the balance of power towards the "new" senate.

UGC's sums

Sir, - It has been the official policy of the University of Stirling and the practice of individual members of staff, both before and since the University Grants Committee's recent letters to university vice-chancellors and principals on cuts in finance and student numbers, to refrain from public comment which would involve their making invidious comparisons between universities. The exceptions have been to correct information in the media which on occasions have meant making a case for Stirling itself without comparison with other individual universities. I am therefore saddened when colleagues from other universities are forced into adopting a different approach when leading for their own universities.

I am particularly writing about my good friend Terry Smith's article (*THES*, July 17) "When it comes to the cuts, what constitutes universities?" He rightly describes comparisons between the universities which have suffered worst in these cuts and some others which have not as "unfair" by referring to the inverse situation of cuts to the percentages of unemployed graduates and "university" at each institution during the six year period 1974-79 inclusive.

Unfortunately, for reasons best known to himself, he excludes the one Scottish university which has been most severely cut, namely Stirling. I therefore quote the relevant figures for Stirling for the years in question (see table).

A comparison of these figures with those which Terry Smith quoted for Aston, Bradford, Hull and Salford (the English universities which, with Keele, have been most affected by the cuts) and East Anglia, Essex, Sussex, Warwick and York (which are among the English universities least affected), reveal that while for some years Stirling's figures for unemployed do not match the figures for these universities, the Stirling

YEAR	UNEMPLOYED %	UNKNOWN %	PROPOSED REDUCTION % IN STUDENTS
1974	2.0	4.0	
1975	3.8	4.0	
1976	7.3	3.2	
1977	6.8	5.8	
1978	11.0	6.6	
1979	8.8	8.6	
AVERAGE 74-79	6.6	5.3	18.2

Architecture merger

Sir, - Various reports have been made in the press about the UGC letter to it affects the schools of architecture in Bath and Bristol. Many of these have been elaborations of the sentence in the UGC letter to Bristol, which simply reads as follows:

"The committee invites the university to discuss with the University of Bath the possibility of cooperation in architecture."

The sentence in the letter to Bath I have been assured that this means exactly what it says, that should each look carefully at our resources to see what in due course

The second factor which I believe Mr David has missed is the real resentment which Swinerton-Dyer approach to the "central services" in his second report. This resentment is manifest in large and small colleges. He suggested that no great savings could be made in this area without marked changes to the customs and practices of the university. Surely the essence of the university is the teaching and research which is carried on in the colleges. Closures and mergers are suggested for academic departments and whole institutions, yet the Senate House seems sacrosanct.

Peter and his committee might do well to look at the federal University of Wales. Wales has been given a new student number target of 17,000 by the UGC - London 32,000. The UGC has earmarked a grant of £1.7m for the University of Wales Registry - a cost of £100 per student. Mr David shows the central costs of London as £17m - a cost of £531 per student. In some measure,

average figure for the period of 6.6 per cent is superior to that of all the universities in the second group and is not greatly inferior to that of Hull. If we compare the "unknowns" the Stirling average of 5.3 per cent compares very favourably with East Anglia's 17.1 per cent, Essex's 13.4 per cent, Sussex's 16.4 per cent, Warwick's 11.9 per cent, York's 6.6 per cent and even Hull's 5.4 per cent.

It would therefore seem that whatever criteria the UGC has used, the employability of a university's graduates has not been too influential in their decision making.

While it may be true that the Scottish universities as a whole have suffered less severely than the English universities as a whole, there does seem to have been a distinct bias by the UGC in favour of the new universities in England, such as the ones named by Terry Smith, which are comparable in student mix to Stirling. Scotland's only completely new university, just as Bradford, Aston and Salford of the new English technological universities wonder why they have been selected for particularly vicious cuts, so we at Stirling wonder why of all the other "new" universities of a non-technological nature we have been singled out for harsh treatment. We feel especially puzzled as in our comparatively short history we have proved to be a very viable university becoming more viable each year as we have grown to a 3,000 state university through encouragement by the UGC.

Although by reason of its status the UGC does not have to explain its decisions, it must surely be aware by now that it owes it to its colleagues in the individual universities to reveal the criteria by which it reached their decisions on each.

Yours faithfully,
W. H. A. ABBOTT,
Chief Careers Adviser, University of Stirling.

might be shared. The fact that Bristol and Bath are mentioned in the UGC letters is because they are the only two university schools which are near one another. It just happens that in Glasgow, Edinburgh, Liverpool, Manchester and London, where there is more than one school, only one is financed through the UGC.

It clearly is sensible for schools that are nearby to cooperate more than they have done in the past and thus exploit their joint strengths. Yours faithfully,
IVOR SMITH,
Professor of Architecture, University of Bristol.

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The sentence in the letter to Bath I have been assured that this means exactly what it says, that should each look carefully at our resources to see what in due course

Social scientists and inner cities

Sir, - Peter David, in his article on the contribution of social scientists to inner city problems (*THES*, July 17), makes some valid points about the relationships of their research to policy makers. But he is, we believe, too pessimistic and too dismissive of the efforts of sociologists in particular.

The reconstituted inner city in context panel of the SSRC, to which he refers, includes among its members not only geographers and planners but also social scientists too - a sociologist, social anthropologist, political scientist, demographer as well as economists. This panel has agreed that its present brief is to study the impact of the national economy on those experiencing deprivation many, though not all of whom, live in inner city areas. It fully expects that policy recommendations will result from the research which it commissions.

Some sociologists may well be "returning to notions of alienation and social collapse". But the sociology and social anthropology committees of the SSRC are however jointly sponsoring a series of workshops which bring together the many scholars in these disciplines working specifically on labour markets, the informal economy, the effects of unemployment and related themes. The lessons of such research may not always be palatable to policy makers; they cannot always be presented in the immediate aftermath of a political crisis. But they are certainly relevant - and to suggest that social science has little to offer is to malign these disciplines in a most dangerous manner.

Yours sincerely,
C. J. FORDYCE,
10 Sheppard House, Tulse Hill, London.

Alternative education

Sir, - Your correspondent's article on the alternative movement in higher education (*THES*, July 10), goes to the heart of the matter when it says that non-involvement by universities and other bodies in the US in this development "would have meant ignoring the needs of many people whose schedules did not permit participation in regular courses, as well as those with life experiences as rich as anything available in the classroom".

As a staff tutor in a university extra-mural department, one is consulted by adult students, for some of whom the American "alternative" sector is the only hope for pursuing the research they wish to do and the policy makers; they cannot always be presented in the immediate aftermath of a political crisis. But they are certainly relevant - and to suggest that social science has little to offer is to malign these disciplines in a most dangerous manner.

Certainly the material we index is from mostly mainstream education journals. Articles about education in journals are more difficult to trace. We always welcome suggestions for new journals to index, and take advice from librarians who have considerable knowledge of users' requirements in educational institutions throughout the country. Any journals suggested are considered for inclusion. Incidentally, since 1978, the year Dale Spender took as her example, the number of journals has increased from 195 to 240.

As with similar indexes the subject index of British Education Index is structured in a particular way. Thus, although the terms "sexism" and "feminism" are not included, the terms "women", "equality of opportunity", "girls" and "sex differences" are. In 1978 there were 37 entries under these headings; in 1980 there were 56. Our indexing system allows the indexer to describe an article specifically: e.g. a study on careers advice for girls might conclude that the advice exhibited sexist values; this would not be indexed as being about sexism but as being a study of careers advice for girls.

I would like to make it quite clear that we do not exclude from British Education Index "material which documents existing inadequacies and possible alternatives" which is written by women. If more male oriented or man-written articles are indexed this is a reflection of what is published rather than of our policy. Yours faithfully,
JOHN SHAW,
Department of Extra-Mural Studies, University of Manchester.

Correction

The letter from D. E. Muddiman president of Birkbeck College students' union, (*THES* July 17) should have read... [Birkbeck] college exists mainly to provide part-time education."

Union view

Whither research in the polys?

It is taken by some as an article of faith that research should and must be encouraged in the polytechnics. Certainly, the Council for National Academic Awards has taken this view. Others, however, have argued that, as primarily teaching institutions, the polytechnics should not research but that if they need to delve into such activities, they should concentrate their efforts on those applied areas which can be justified in terms of immediate or short-term financial returns. The local authorities, and to a lesser extent the Department of Education and Science, have subscribed to this latter view.

Logic would possibly lead to a quite different conclusion. If an institute is mainly directed towards research then, surely, it should justify that activity by demonstrating the value of the results to the society which provides the funds. Furthermore, the urgency of most applied research would suggest that it should be done in institutions which can devote manpower and resources to achieving rapid results. On the other hand, those institutions which carry out research as an adjunct to their principal activity of teaching - where lectures are required to use research/consultancy or other such activities as a means of keeping their knowledge up-to-date, their teaching fresh and their students competitive might better afford to indulge in the slower process of pure research.

Nearly ten years ago, the major provider of university research finance, the Science Research Council, set up the first of a series of committees to investigate and advise on the special problems of research and research training in polytechnics. Applied research and industrial collaboration were specially to be encouraged among young staff, and special funds were set aside. Sadly, these could not all be disbursed due to the dearth of suitable projects, so the particular scheme was abandoned.

The SRC's new polytechnics panel now reviews and advises on the council's policies in relation to the polytechnics. Meanwhile, funds remain available through the normal SRC routes, but cooperative awards are seen as being particularly suitable to the needs of the polytechnics. It is good to see that SRC is not blinkered in its view of polytechnic research and that it also provides substantial support for many so-called pure research projects. The SRC and other research councils have also given encouragement.

Local authorities, with the backing of the DES, also support research with the provision of funds for readerships, research assistant/demonstrator posts and for equipment and materials. The salary scale for research assistants now lies in the range £4,386 to £6,141. Inevitably, the variable gap which exists between these salaries and the SRC and SSRC research students' grant generates concern and discontent.

The prevailing attitude is that research is extra to the normal duties of polytechnic academic staff. Allowances against contact hours for research activity and supervision must generally be agreed against a background of increasing teaching loads. Furthermore, since the proportion of senior academic posts in polytechnics (25 per cent), is poor compared with that in the universities (40 per cent), there is little incentive to undertake research. Better promotion prospects should be available in polytechnics. More should also be done - and the CNA must take a primary role - to co-erce those responsible for the administration of polytechnics into creating a more favourable climate for the prosecution of research and to encourage and reward successful scholarly activities among their staff.

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Letters for publication should arrive by Tuesday morning. They should be as short as possible and written on one side of the paper. The editor reserves the right to cut or amend them if necessary.

Neil Macfarlane

The author is chairman of the Research Panel of the Association of Polytechnic Teachers.